

DRAFT

**Pre-Design Sampling and
Remedial Technology
Evaluation Report for VOC
Source Area**

Operable Unit 3 (Former Grumman Settling Ponds),
Bethpage, New York
NYSDEC Site # 1-30-003A

October 2, 2015

DRAFT

Christopher Engler, PE 069748
Principal Engineer

David Stern
Senior Hydrogeologist

Carlo San Giovanni
Project Manager

Michael F. Wolfert
Project Director

**Pre-Design Sampling and
Remedial Technology
Evaluation Report for VOC
Source Area**

Operable Unit 3 (Former
Grumman Settling Ponds),
Bethpage, New York
NYSDEC Site # 1-30-003A

Prepared for:
Northrop Grumman Systems Corporation

Prepared by:
ARCADIS of New York, Inc.
Two Huntington Quadrangle
Suite 1S10
Melville
New York 11747
Tel 631 249 7600
Fax 631 249 7610

Our Ref.:
NY001051.0000.PAKB6

Date:
October 2, 2015

| | |
|--|----|
| Acronyms and Abbreviations | i |
| 1. Introduction | 1 |
| 2. Background | 1 |
| 3. Objectives of the Pre-Design Sampling | 2 |
| 4. Field Methods | 2 |
| 4.1 Preliminary Activities | 2 |
| 4.2 First Phase of Sampling per Work Plan | 3 |
| 4.3 Second Phase of Sampling per Work Plan Addendum | 3 |
| 4.4 TCLP Sampling | 4 |
| 4.5 Field and Laboratory Documentation | 4 |
| 5. Results and Interpretation | 5 |
| 5.1 Data Quality Review | 5 |
| 5.2 TVOC Distribution | 6 |
| 5.3 TCLP Evaluation | 7 |
| 6. Remedial Technologies Evaluation | 7 |
| 6.1 Introduction | 7 |
| 6.2 Conceptual Design for ISTR/SVE | 8 |
| 7. Conclusions | 9 |
| 8. References | 11 |

Tables

- Table 1. Volatile Organic Compounds Sample Summary, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York
- Table 2. Volatile Organic Compounds Sample Details, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York
- Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design

Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York

- Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Based Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York
- Table 5. Comparison of Field Analytical and Fixed Base Laboratory TVOC Results, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York
- Table 6. Concentrations of TCLP Volatile Organic Compounds in Soil Samples from Soil Borings, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York

Figures

- Figure 1 Site Area Location, Northrop Grumman Systems Corporation, Bethpage, New York.
- Figure 2 Site Area Features, Northrop Grumman Systems Corporation, Bethpage, New York
- Figure 3 Bethpage Community Park VOC Source Area and Sampling Locations, Northrop Grumman Systems Corporation, Bethpage, New York
- Figure 4 Bethpage Community Park Vadose Zone Areal Extent of TVOCs in Soils Greater than 10 mg/kg, Northrop Grumman Systems Corporation, Bethpage, New York
- Figure 5 Bethpage Community Park Cross Section A-A' of TVOCs in Soil (Area 1), Northrop Grumman Systems Corporation, Bethpage, New York
- Figure 6 Bethpage Community Park Cross Section B-B' of TVOCs in Soil (Area 2), Northrop Grumman Systems Corporation, Bethpage, New York
- Figure 7 Bethpage Community Park VP-27 Soil Resampling Comparison, Northrop Grumman Systems Corporation, Bethpage, New York
- Figure 8 Bethpage Community Park B-34 Soil Resampling Comparison, Northrop Grumman Systems Corporation, Bethpage, New York
- Figure 9 Bethpage Community Park B-60 Soil Resampling Comparison, Northrop Grumman Systems Corporation, Bethpage, New York

Figure 10 Conceptual Remedial Program for In-Situ Thermal Remediation Area (40-55 feet), Northrop Grumman Systems Corporation, Bethpage, New York

Appendices

- A Sample/Core Logs
- B Community Air Monitoring Data
- C IDW Waste Characterization Data and Disposal Manifests
- D Data Usability Summary Reports
- E Laboratory Reports

Acronyms and Abbreviations

| | |
|------------------|---|
| Arcadis | Arcadis of New York, Inc. formerly ARCADIS |
| Park | Bethpage Community Park |
| Bls | below land surface |
| DSITMS | Direct-sampling ion trap mass spectrometer |
| ELAP | Environmental Laboratory Accreditation Program |
| ELLE | Eurofins Lancaster Laboratories Environmental |
| FS | Feasibility Study |
| Ft | Feet |
| ISTD | In-Situ Thermal Desorption |
| ISTR | In-Situ Thermal Remediation |
| Northrop Grumman | Northrop Grumman Systems Corporation |
| NCDOH | Nassau County Department of Health |
| NYCRR | New York Code of Rules and Regulations |
| NYSDEC | New York State Department of Environmental Conservation |
| NYSDOH | New York State Department of Health |
| OU | Operable Unit |
| Park | Bethpage Community Park |
| mg/kg | milligrams per kilogram |
| RI | Remedial Investigation |
| ROD | Record of Decision |
| QAP | Quality Assurance Plan |

| | |
|---------|---|
| SVE | Soil vapor extraction |
| TCL | Target Compound List |
| Town | Town of Oyster Bay |
| TriadES | Triad Environmental Services |
| TVOCs | Total volatile organic compounds |
| USEPA | United States Environmental Protection Agency |
| VOCs | Volatile organic compounds |

1. Introduction

This Pre-Design Sampling and Remedial Technology Evaluation Report for the Volatile Organic Compound (VOC) Source Area (Pre-Design Report) has been prepared by Arcadis of New York, Inc. (Arcadis), on behalf of Northrop Grumman Systems Corporation (Northrop Grumman), in accordance with the Order on Consent for Operable Unit 3 (OU3) (NYSDEC 2014). The pre-design sampling was conducted to further characterize and delineate the VOC source area in the Bethpage Community Park (Park) in Bethpage, New York (see **Figure 1** for general site location and **Figure 2** for site area features).

The pre-design sampling activities were performed pursuant to the New York State Department of Environmental Conservation (NYSDEC) approved Pre-Design Sampling Work Plan for VOC Source Area (Work Plan; EMAGIN 2014), the NYSDEC- approved Work Plan Addendum (ARCADIS 2014), and the Work Plan Addendum for Additional Soil Sampling (TCLP VOCs and Metals) (ARCADIS 2015a). This investigation focused primarily on two separate areas, the Former Rag Pit (Area 1) and a VOC-impacted area northwest of the Former Rag Pit (Area 2) (see **Figure 3**). These two areas comprise the portion of the Park that was formerly used as a baseball field and is hereafter referred to as the “ball field”. A summary of the field activities is provided in Section 4 of this report.

2. Background

As described in the Site Area Remedial Investigation (RI) Report (ARCADIS 2011a) and the Site Area Feasibility Study (FS) Report (ARCADIS 2011b), the vadose zone (including the low permeability zone [LPZ]) within Area 1 and Area 2 in the ball field is impacted with total VOCs (TVOCs) greater than 10 milligrams per kilogram (mg/kg). For the purposes of this project, and consistent with the methodology employed in the FS, TVOCs in concentrations greater than 10 mg/kg are considered to be indicative of a potential VOC source to groundwater, as defined in 6 NYCRR Part 375-1.2.

Since 2008, Northrop Grumman has operated the Bethpage Park Soil Gas Containment System (BPSGCS) on the adjoining former McKay Field and Grumman Plant 24 Access Road properties. The BPSGCS continuously extracts vapor from the subsurface via extraction wells and prevents VOCs in soil gas from migrating from the Park. Since 2009, Northrop Grumman has operated the Bethpage Park Groundwater Containment System (BPGWCS; previously referred to as the Groundwater Interim Remedial Measure) along the southern boundary of the Park. The BPGWCS

continuously extracts groundwater from the subsurface via four remedial wells and controls VOCs in groundwater from migrating from the Park.

Following issuance of the FS, the OU3 Record of Decision (ROD; NYSDEC 2013) selected a remedy for the “VOC rag pit area source area(s) in a low permeability zone present approximately 40 feet bgs” consisting of in-situ thermal desorption and soil vapor extraction (ISTD/SVE) or an alternative, in-situ treatment technology capable of achieving comparable removals.

3. Objectives of the Pre-Design Sampling

The pre-design sampling was conducted to meet the following objectives:

1. Refine the characterization and delineation of the VOC source area(s) in the vadose zone to support the design of the remedy.
2. Re-evaluate the sustainability and cost effectiveness of the ROD remedy in consideration of the refined characterization and delineation.

4. Field Methods

4.1 Preliminary Activities

The following activities were conducted to prepare for sampling:

- Vegetation was cleared from the ball field.
- In accordance with the Work Plan, the thickness of cover material placed by the Town of Oyster Bay (Town) in 2012 to allow the ball field area to be used for Town equipment storage was measured prior to sampling to adjust the sampling intervals to correspond to the original grade.
- A property access agreement was signed with the Town to conduct sampling and related activities on the Town's property.
- A 20-foot sampling grid was surveyed and staked over the ball field area to guide sampling activities and record sampling locations (see **Figure 3**). The alphanumeric grid points were used in the sample identification numbers, with a few exceptions (see **Table 1**).

4.2 First Phase of Sampling per Work Plan

VOC pre-design sampling was conducted in early November 2014 in accordance with the NYSDEC-approved Work Plan. The pre-design sampling was focused in Areas 1 and 2 of the ball field where vadose zone soil was found to contain TVOCs above 10 mg/kg during the RI. These areas are shown on **Figure 3**.

Soil samples from the initial 24 soil borings identified in the Work Plan were collected using direct-push drilling rigs equipped with Dual-Tube or Macro-Core® samplers (depending on sample depth). Sampling locations are shown on **Figure 3** and depths are described in **Tables 1** and **2**. Samples were generally collected at 4-foot vertical intervals in each boring unless otherwise noted in the tables.

Soil samples were analyzed for VOCs in real-time using Triad Environmental Services' (TriadES) mobile laboratory (field analytical method), the direct-sampling ion trap mass spectrometer (DSITMS) and United States Environmental Protection Agency (USEPA) Method 8265. Approximately 15 percent of the field analysis samples were also submitted for confirmatory analysis to Eurofins Lancaster Laboratories Environmental (ELLE) of Lancaster, Pennsylvania (fixed base laboratory), an Environmental Laboratory Accreditation Program (ELAP) New York State Department of Health (NYSDOH) certified laboratory. Confirmatory analyses were conducted on extracts, from the original "parent" samples, prepared by TriadES. These samples were analyzed for the Target Compound List (TCL) VOCs using USEPA Method 8260c.

Table 2 provides a summary of the VOC samples analyzed using field analytical method and at the fixed base laboratory.

4.3 Second Phase of Sampling per Work Plan Addendum

Following receipt and review of the VOC sampling results from the initial 24 borings, it was determined that additional sampling was needed to more precisely delineate the VOC source area(s). Accordingly, a Work Plan Addendum (ARCADIS 2014) was prepared, which included drilling and sampling of 16 additional soil borings (based on screening results received during the field work 3 more borings were drilled, bringing the total additional borings drilled/sampled to 19). The additional phase of VOC pre-design sampling was conducted between mid-November and mid-December, 2014 in accordance with the NYSDEC-approved Work Plan Addendum. Of the 19 additional soil borings, 10 were drilled at locations previously sampled during the RI activities to evaluate changes in the TVOC concentrations since the RI. The remaining 9 borings were drilled near Areas 1 and 2 as step-out borings to refine the delineation of the VOC

source area(s). Sampling locations are shown on **Figure 3** and depths are described in **Tables 1** and **2**. Samples were generally collected at 3-foot vertical intervals in each boring unless otherwise noted in the tables.

The additional soil samples were analyzed in real time using the TriadES mobile laboratory and the DSITMS USEPA Method 8265, with approximately 15 percent of the samples also analyzed by the fixed base laboratory, ELLE, for TCL VOCs using USEPA Method 8260c. The procedures and protocols implemented were consistent with the NYSDEC-approved Work Plan.

4.4 **TCLP Sampling**

ARCADIS collected 15 additional samples for analysis of selected VOCs using the toxicity characteristic leaching procedure (TCLP). The purpose of these analyses was to evaluate if soils might potentially be classified as hazardous waste if excavated. TCLP sampling was conducted in mid-May 2015 in accordance with the Work Plan Addendum for Additional Soil Sampling (TCLP VOCs and Metals) (ARCADIS 2015a).

4.5 **Field and Laboratory Documentation**

Soil boring field logs and back-up documentation are included in the following appendices:

- **Appendix A – Sample/Core Logs**
- **Appendix B – Community Air Monitoring Data.**
Air monitoring for volatile organic compounds and particulates (i.e., dust) was performed in accordance with the Community Air Monitoring Plan referenced in the Work Plan.
- **Appendix C – IDW Characterization Data and Disposal Manifests.**
Investigation derived waste (IDW) produced during sampling activities was collected, containerized, and temporarily stored at the Northrop Grumman facility before being characterized (as required by the disposal facility) and disposed by the fixed base laboratory at an approved facility.
- **Appendix D – Data Usability Summary Report. (DUSR) (fixed laboratory only)**

The DUSR provides an evaluation of the analytical data to determine if it meets the site-specific criteria for data quality and use.

- **Appendix E – Laboratory Reports (Field Analytical and Fixed Base laboratories)**

5. Results and Interpretation

This section provides a summary of the results of the pre-design sampling. **Table 3** presents VOC concentrations in soil samples analyzed by the field analytical method and **Table 4** presents VOC concentration in soil samples analyzed by the fixed base laboratory. Samples that exhibited TVOC concentrations greater than 10 mg/kg are highlighted (outlined) in **Tables 3 and 4**.

5.1 Data Quality Review

The quality of the mobile laboratory data was evaluated by examining the laboratory's internal data quality assurance/quality control (QA/QC) results and by comparing the mobile laboratory data to the fixed base laboratory results for confirmation samples.

The mobile laboratory's internal QA/QC program performed QA/QC checks (sample blank, continuing calibration check, performance check, matrix spike, and duplicate analysis) for a minimum of every 20 samples analyzed. (See Appendix E for data). Acceptance criteria defined by TriadES' Quality Assurance Plan (QAP) were met. The criteria included:

- 30% (+/-) for analysis of continuing calibration check standards versus externally purchased performance check standards.
- 30% (+/-) for matrix spike analyses.
- 30% relative difference for duplicate analyses.
- Results less than the method detection limit for blank analyses.

Approximately 15 percent of the mobile laboratory samples were submitted for confirmatory analysis at the fixed base laboratory. A summary of the comparison is provided on **Table 5**, which lists the mobile laboratory concentration in one column and the fixed base laboratory concentration in the adjacent column. The final column of the

table identifies whether the mobile laboratory data and fixed base laboratory data lead to the same conclusion relative to the 10 mg/kg TVOC threshold used in the Work Plan. The table demonstrates that the results of the mobile laboratory and fixed base laboratory are in agreement approximately 95 percent of the time. Based on the mobile laboratory's internal QAQC results and the comparison with the fixed base laboratory's results, the mobile laboratory and fixed laboratory results are considered acceptable for meeting the objectives described in Section 3.

5.2 TVOC Distribution

An Environmental Visualization Software (EVS) model was used to contour data in three dimensions. The contours produced by the EVS model were then reviewed by ARCADIS and modified based on experience and site conditions.

The areal extent of TVOCs in the subsurface is presented on **Figure 4** and the vertical extent of TVOCs for Areas 1 and 2 are shown on **Figures 5** and **6**, respectively. The observed subsurface distribution of TVOCs has the following characteristics:

- TVOCs greater than 10 mg/kg were found in Areas 1 and 2.
- In both of the above areas, TVOC concentrations above 10 mg/kg, indicative of source areas, are generally present at two depth intervals:
 - Approximately 5 to 15 feet below land surface (ft bls), with a maximum concentration of 4,600 mg/kg in Area 1 and a maximum concentration of 880 mg/kg in Area 2.
 - Approximately 40 to 55 ft bls, with a maximum concentration of 4,800 mg/kg in Area 1 and a maximum concentration of 17 mg/kg in Area 2.
- TVOC impacts above 10 mg/kg were not observed at depths from approximately 15 to 40 ft bls in either Area 1 or Area 2. This finding differs from the Site Area RI results (2005 to 2007), which indicated TVOC concentrations above 10 mg/kg in soil at depths from 5 to 55 ft bls. This reduction in TVOCs, since completion of the RI, is likely due to the beneficial effect of the BPSGCS.
- TVOC concentrations above 10 mg/kg are present in both Areas 1 and 2 in the LPZ (in the 40 to 55 ft bls interval). The LPZ was previously identified during the RI as consisting predominately of clay with thin seams of silt and sand.

- In Area 1, toluene and trichloroethene (TCE) are the predominant TVOCs in both the shallow and deep intervals. In Area 2, toluene is the predominant TVOC in the shallow interval and toluene and TCE are the predominant TVOCs in the deep interval.
- Changes in TVOC concentrations since the RI sampling in 2005-2007 were evaluated at selected locations. **Figures 7, 8, and 9** compare the pre-design TVOC soil concentrations versus depth to the data collected during the RI. These figures indicate that, since sampling during the RI, TVOC concentrations have generally decreased by several orders of magnitude in the permeable (sandy) intervals over which the BPSGCS extraction wells are screened (approximately 10-50 ft bls). This observed decrease in TVOC concentrations is likely due to the effect of the BPSGCS wells extracting VOC-impacted soil gas from the sandy zones in the Park soils. The clayey LPZ (40-55 ft bls) exhibited a smaller reduction over time in VOC concentrations, with some increases evident. This observation may be due to the lower permeability of the LPZ soils which restricts airflow and, therefore, limits the ability of the BPSGCS wells to extract soil gas.

5.3 TCLP Evaluation

TCLP results are summarized in **Table 6**.

- Of the 10 individual VOCs with applicable TCLP values under the Resource Conservation and Recovery Act (RCRA), only tetrachloroethene (PCE) and TCE were detected in the TCLP extract. PCE was detected in one sample, and TCE was detected in five samples.
- Only TCE exceeded the TCLP criteria in the samples analyzed.

If needed for evaluating possible soil excavation approaches, further TCLP characterization of soils with elevated VOC concentrations may be conducted.

6. Remedial Technologies Evaluation

6.1 Introduction

The OU3 ROD selected a remedy for the deep VOC source area(s) consisting of in-situ thermal desorption and soil vapor extraction (ISTD/SVE) or an alternative in-situ

treatment technology capable of achieving comparable removals. VOCs greater than 10 mg/kg (i.e., target treatment zones) are present in deep vadose zone soils (approximately 40-55 ft bls), with a total estimated volume of 2,700 cubic yards.

The remedial action objective (RAO) for the remedy is to remove the source by reducing the TVOCs in the deep VOC source areas (approximately 40-55 ft bls) to an average less than 10 mg/kg. This would be a modification of the ROD specification to treat to protection of groundwater SCOs, but is consistent with 6 NYCRR Part 375-6.5, which provides an exception to protection of groundwater SCOs when:

- The on-site source is addressed by the remedial program. The TVOC source would be addressed by ISTR/SVE to remediate TVOCs as high as 4,800 mg/kg in the source area(s) to an average of less than 10 mg/kg.
- An environmental easement will be put in place which provides for a groundwater use restriction on the site. An environmental easement would be put in place as part of the remedy to restrict groundwater use on the site.
- The remedy includes controls or treatment to address off-site migration. Continued operation of the BPGWCS controls off-site migration of contaminated groundwater downgradient of the source area(s).
- Groundwater quality will improve over time. Steady improvement in groundwater quality over time has been demonstrated in quarterly and annual effectiveness reports for the BPGWCS (ARCADIS 2015).

Based on the RAO and distribution of VOC impacts in the low permeability zone, the remedial technology applicable to the VOC source area(s) is in-situ thermal remediation/soil vapor extraction (ISTR/SVE), using either thermal conductive heating or electrical resistivity heating. This technology is protective of public health and the environment, will meet the applicable RAO, will achieve permanent and significant reduction of toxicity, mobility, and volume of contamination, and is technically and administratively feasible to implement.

6.2 Conceptual Design for ISTR/SVE

An ISTR system consists of a network of both heater wells (electric or gas-fired) and soil vapor extraction (SVE) wells screened within various depth intervals of the target treatment zone. The target treatment zone for the VOCs in Areas 1 and 2 would

consist of approximately 2,700 cubic yards of soil. The conceptual remedial design for VOCs would consist of the following elements (see **Figure 10** for a conceptual site plan):

- Approximately 85 heater wells to heat the soil and generate a temperature gradient. The temperature gradient allows the VOCs to volatilize by increasing their vapor pressure.
- 20 SVE wells to capture the volatilized VOCs and convey them to an effluent treatment system.
- An ISTR effluent treatment system to meet applicable air and water discharge SCGs. The system typically would include a heat exchanger, knockout tank, process blower, transfer pump, vapor treatment (i.e., thermal oxidizer and scrubber) and liquid treatment (i.e. activated carbon).
- An impermeable cover (e.g., synthetic liner) installed at land surface throughout and beyond the extent of the target treatment zone to enhance the extraction of the volatilized VOCs and minimize short circuiting to the atmosphere,
- A power distribution system for the heaters would be installed adjacent to the treatment area. Controls and SVE conveyance piping would be installed on top of the insulating cover.

Based on the estimated volume of the target treatment zone, current baseline VOC concentrations, and performance of the technology at similar sites, the ISTR/SVE system would operate for approximately 6 to 8 months. Based on the extensive knowledge regarding geologic and hydrologic conditions at the Site as well as information regarding the concentrations and distribution of constituents of concern throughout the project area, performance of the ISTR system can be accurately predicted. These performance predictions are based on Arcadis' extensive experience at sites with similar geology, hydrogeology, constituents of concern, and remedial objectives. Comparable technologies that meet the RAO and comply with applicable regulations may also be considered.

7. Conclusions

The following conclusions are made based on the data provided in this report:

- The pre-design sampling has achieved its stated objectives of refining the characterization and delineation of the VOC source areas in the vadose zone and supporting the design of the remedy.
- The results of the sampling confirmed that Area 1 and Area 2 exhibit TVOCs at concentrations in soil greater than 10 mg/kg. TVOCs greater than 10 mg/kg are present in those areas, mostly over two depth intervals, at approximately 5 to 15 ft bls and 40-55 ft bls.
- The estimated volume of soil in the low permeability zone from 40-55 ft bls with TVOCs greater than 10 mg/kg for Areas 1 and 2 combined is 2,700 cubic yards.
- TVOC concentrations greater than 10 mg/kg were generally not observed in the 15 to 40 ft bls zone, which had exhibited concentrations greater than 10 mg/kg during the RI. In general, VOC concentrations in Areas 1 and 2 have decreased substantially in the permeable soil interval (i.e., 15 – 40 ft bls) since completion of the OU3 Site Area RI, likely due to the effect of the BPSGCS. Smaller VOC reductions in the deeper LPZ soils (40-55 ft bls) were observed in those areas, likely because the BPSGCS had a lesser impact on the low-permeability soils in the LPZ.
- ISTR/SVE for VOCs is an effective remedial technology that is capable of meeting the RAO.

8. References

ARCADIS 2015. Operation, Maintenance, and Monitoring Report for the Bethpage Park Groundwater Containment System, 2014 Annual Summary, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York. NYSDEC 1-30-003A, August 27, 2015.

ARCADIS 2011a. Remedial Investigation Report (Site Area). Operable Unit 3 – Former Grumman Settling Ponds, Bethpage, New York. February 8, 2011.

ARCADIS 2011b. Site Area Feasibility Study, Operable Unit 3 – Former Grumman Settling Ponds, Bethpage, New York. March 4, 2011.

ARCADIS 2014. Pre-Design Sampling Work Plan Addendum for VOC Source Area.

ARCADIS 2015a. Work Plan Addendum for Additional Soil Sampling (TCLP VOCs and Metals), Operable Unit 3, Former Grumman Settling Ponds, Bethpage, New York. April 29, 2015.

EMAGIN 2014. Pre-Design Sampling Work Plan for VOC Source Area. Operable Unit 3, Former Grumman Settling Ponds, Bethpage, New York. May 1, 2014.

New York State Department of Environmental Conservation (NYSDEC) 2013. Operable Unit 3 Record of Decision. October 2013.

New York State Department of Environmental Conservation (NYSDEC). 2014. Order On Consent. May 2014.

DRAFT

Tables

Table 1. Volatile Organic Compounds Sample Summary, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Area ID ⁽¹⁾ | Boring ID ⁽²⁾ | Interval Sampled (ft bls) | Boring Completion Date |
|---|------------------------------|---------------------------|------------------------|
| <i>Borings completed per Work Plan</i> | | | |
| 2 | F-2-14 | 20 - 52 | 11/6/2014 |
| 2 | F-7-14 | 2 - 30 | 11/3/2014 |
| 2 | nG-3-14 ⁽³⁾ | 2 - 22 | 11/3/2014 |
| 2 | nJ-6-14 ⁽³⁾ | 2 - 22 | 11/3/2014 |
| 1 | M-7-14 | 2 - 58 | 11/3/2014 |
| 1 | O-5-14 | 2 - 58 | 11/7/2014 |
| 1 | nO-8-14 | 2 - 30 | 11/3/2014 |
| 1 | nQ-10-14 | 2 - 30 | 11/3/2014 |
| 1 | nQ-13-14 | 2 - 30 | 11/3/2014 |
| 1 | L-8-14 | 2 - 58 | 11/3/2014 |
| 1 | L-12-14 | 2 - 58 | 11/6/2014 |
| 1 | N-12-14 | 2 - 58 | 11/6/2014 |
| 1 | P-7-14 | 2 - 58 | 11/5/2014 |
| 1 | P-12-14 | 2 - 58 | 11/5/2014 |
| 1 | Q-8-14 | 2 - 58 | 11/5/2014 |
| 2 | G-8-14 | 2 - 30 | 11/6/2014 |
| 2 | H-7-14 | 2 - 30 | 11/5/2014 |
| 2 | I-2-14 | 20 - 52 | 11/6/2014 |
| 2 | J-4-14 | 20 - 52 | 11/7/2014 |
| 1 | K-10-14 | 2 - 58 | 11/7/2014 |
| 1 | nL-10-14 ⁽³⁾ | 2 - 30 | 11/5/2014 |
| 1 | P-9-14 | 2 - 58 | 11/7/2014 |
| 2 | H-5-14 | 20 - 52 | 11/7/2014 |
| 1 | M-9-14 | 2 - 58 | 11/5/2014 |
| <i>Additional Borings completed per Work Plan Addendum</i> | | | |
| | B-34-14 | 0 - 60 | 11/17/2014 |
| | B-60-14 | 0 - 30 | 11/17/2014 |
| | VP-27-14 | 0 - 60 | 11/17/2014 |
| | F-4-14 | 0 - 30 | 12/15/2014 |
| | F-9-14 | 0 - 15 | 12/15/2014 |
| | nK-7-14 ⁽³⁾ | 30 - 60 | 12/15/2014 |
| | nQ-13-14R ⁽³⁾⁽⁴⁾ | 30 - 60 | 12/16/2014 |
| | nR-10-14 ⁽³⁾ | 0 - 60 | 12/16/2014 |
| | nG-2-14 ⁽³⁾ | 0 - 60 | 12/18/2014 |
| | nG-6-14 ⁽³⁾ | 0 - 30 | 12/17/2014 |
| | F-6-14 | 0 - 30 | 12/17/2014 |
| | nL-10-14R ⁽³⁾⁽⁴⁾ | 30 - 60 | 12/16/2014 |
| | nM-10-14 ⁽³⁾ | 0 - 60 | 12/16/2014 |
| | nM-11-14 ⁽³⁾ | 0 - 60 | 12/17/2014 |
| | nN-9-14 ⁽³⁾ | 0 - 60 | 12/17/2014 |
| | O-8-14 | 0 - 60 | 12/17/2014 |
| | Q-9-14 | 0 - 60 | 12/17/2014 |
| | nQ-10-14R ⁽³⁾⁽⁴⁾ | 30 - 60 | 12/17/2014 |
| | nZZC-13-14 ⁽³⁾⁽⁵⁾ | 0 - 10 | 12/17/2014 |
| <i>TCLP sampling</i> | | | |
| | B-34-14 | 4.5 - 55.5 | 5/12/2015 |
| | F-6-14 | 10.5 - 16.5 | 5/8/2015 |
| | H-7-14 | 8 - 20 | 5/12/2015 |
| | H-5-14 | 46 | 5/12/2015 |

Notes and Abbreviations:

- (1) Area ID corresponds to sampling areas defined in the Pre-Design Sampling Work Plan for VOC Source Area (Work Plan) (EMAGIN 2014) and shown on Figure 3.
 - (2) Boring IDs correspond to sampling grid nodes (Figure 3) except for B-34-14, B-60-14, and VP-27-14.
 - (3) "n" in boring ID designates boring is located between grid nodes
 - (4) "R" in boring ID designates redrilling of previous sampled location to collect samples in deeper interval.
 - (5) Boring location in McKay Field access road
- ft bls Feet below original land surface that existed prior to the Town of Oyster Bay bringing in cover material.

Table 2. Volatile Organic Compounds Sample Details, Park Soil Pre-Design Sampling,
Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID | Sample Midpoint Depth (ft bbls) | Sample ID | Date Sampled | VOC Fixed Base Lab Analysis ⁽²⁾ |
|---|---------------------------------|------------|--------------|--|
| <i>Borings completed per Work Plan</i> | | | | |
| F-2-14 | 22 | F-2-14_22 | 11/6/2014 | |
| F-2-14 | 26 | F-2-14_26 | 11/6/2014 | |
| F-2-14 | 30 | F-2-14_30 | 11/6/2014 | |
| F-2-14 | 34 | F-2-14_34 | 11/6/2014 | X |
| F-2-14 | 38 | F-2-14_38 | 11/6/2014 | |
| F-2-14 | 42 | F-2-14_42 | 11/6/2014 | |
| F-2-14 | 46 | F-2-14_46 | 11/6/2014 | |
| F-2-14 | 50 | F-2-14_50 | 11/6/2014 | |
| F-7-14 | 4 | F-7-14_4 | 11/3/2014 | |
| F-7-14 | 8 | F-7-14_8 | 11/3/2014 | |
| F-7-14 | 12 | F-7-14_12 | 11/3/2014 | |
| F-7-14 | 16 | F-7-14_16 | 11/3/2014 | |
| F-7-14 | 20 | F-7-14_20 | 11/3/2014 | |
| F-7-14 | 24 | F-7-14_24 | 11/3/2014 | |
| F-7-14 | 27 | F-7-14_27 | 11/3/2014 | |
| nG-3-14 | 4 | nG-3-14_4 | 11/3/2014 | |
| nG-3-14 | 8 | nG-3-14_8 | 11/3/2014 | |
| nG-3-14 | 12 | nG-3-14_12 | 11/3/2014 | |
| nG-3-14 | 16 | nG-3-14_16 | 11/3/2014 | |
| nG-3-14 | 20 | nG-3-14_20 | 11/3/2014 | |
| nJ-6-14 | 8 | nJ-6-14_4 | 11/3/2014 | |
| nJ-6-14 | 8 | nJ-6-14_8 | 11/3/2014 | |
| nJ-6-14 | 12 | nJ-6-14_12 | 11/3/2014 | X |
| nJ-6-14 | 16 | nJ-6-14_16 | 11/3/2014 | |
| nJ-6-14 | 20 | nJ-6-14_20 | 11/3/2014 | |
| M-7-14 | 8 | M-7-14_8 | 11/3/2014 | |
| M-7-14 | 12 | M-7-14_10 | 11/3/2014 | |
| M-7-14 | 19 | M-7-14_19 | 11/3/2014 | |
| M-7-14 | 22 | M-7-14_22 | 11/3/2014 | |
| M-7-14 | 25 | M-7-14_25 | 11/3/2014 | |
| M-7-14 | 32 | M-7-14_32 | 11/3/2014 | |
| M-7-14 | 34 | M-7-14_34 | 11/3/2014 | |
| M-7-14 | 38 | M-7-14_38 | 11/3/2014 | |
| M-7-14 | 40 | M-7-14_40 | 11/3/2014 | |
| M-7-14 | 44 | M-7-14_44 | 11/3/2014 | |
| M-7-14 | 48 | M-7-14_48 | 11/3/2014 | |
| M-7-14 | 52 | M-7-14_52 | 11/3/2014 | X |
| M-7-14 | 56 | M-7-14_56 | 11/3/2014 | X |
| O-5-14 | 4 | O-5-14_4 | 11/7/2014 | |
| O-5-14 | 8 | O-5-14_8 | 11/7/2014 | |
| O-5-14 | 12 | O-5-14_12 | 11/7/2014 | |
| O-5-14 | 16 | O-5-14_16 | 11/7/2014 | |
| O-5-14 | 20 | O-5-14_20 | 11/7/2014 | |
| O-5-14 | 24 | O-5-14_24 | 11/7/2014 | |
| O-5-14 | 28 | O-5-14_28 | 11/7/2014 | |
| O-5-14 | 32 | O-5-14_32 | 11/7/2014 | |
| O-5-14 | 36 | O-5-14_36 | 11/7/2014 | |
| O-5-14 | 40 | O-5-14_40 | 11/7/2014 | |
| O-5-14 | 44 | O-5-14_44 | 11/7/2014 | |
| O-5-14 | 48 | O-5-14_48 | 11/7/2014 | |
| O-5-14 | 52 | O-5-14_52 | 11/7/2014 | X |

Notes and Abbreviations on last page.

Table 2. Volatile Organic Compounds Sample Details, Park Soil Pre-Design Sampling,
Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID | Sample Midpoint Depth (ft bbls) | Sample ID | Date Sampled | VOC Fixed Base Lab Analysis ⁽²⁾ |
|-----------|---------------------------------|-------------|--------------|--|
| nO-8-14 | 4 | nO-8-14_4 | 11/3/2014 | |
| nO-8-14 | 8 | nO-8-14_8 | 11/3/2014 | |
| nO-8-14 | 12 | nO-8-14_12 | 11/3/2014 | |
| nO-8-14 | 16 | nO-8-14_16 | 11/3/2014 | |
| nO-8-14 | 20 | nO-8-14_20 | 11/3/2014 | |
| nO-8-14 | 24 | nO-8-14_24 | 11/3/2014 | |
| nO-8-14 | 28 | nO-8-14_28 | 11/3/2014 | |
| nQ-10-14 | 4 | nQ-10-14_4 | 11/3/2014 | |
| nQ-10-14 | 8 | nQ-10-14_8 | 11/3/2014 | |
| nQ-10-14 | 12 | nQ-10-14_12 | 11/3/2014 | |
| nQ-10-14 | 16 | nQ-10-14_16 | 11/3/2014 | |
| nQ-10-14 | 20 | nQ-10-14_20 | 11/3/2014 | |
| nQ-10-14 | 24 | nQ-10-14_24 | 11/3/2014 | |
| nQ-10-14 | 28 | nQ-10-14_28 | 11/3/2014 | |
| nQ-13-14 | 4 | nQ-13-14_4 | 11/3/2014 | X |
| nQ-13-14 | 8 | nQ-13-14_8 | 11/3/2014 | |
| nQ-13-14 | 12 | nQ-13-14_12 | 11/3/2014 | |
| nQ-13-14 | 16 | nQ-13-14_16 | 11/3/2014 | |
| nQ-13-14 | 20 | nQ-13-14_20 | 11/3/2014 | |
| nQ-13-14 | 24 | nQ-13-14_24 | 11/3/2014 | |
| nQ-13-14 | 28 | nQ-13-14_28 | 11/3/2014 | |
| L-8-14 | 4 | L-8-14_4 | 11/3/2014 | |
| L-8-14 | 8 | L-8-14_8 | 11/3/2014 | X |
| L-8-14 | 12 | L-8-14_12 | 11/3/2014 | |
| L-8-14 | 16 | L-8-14_16 | 11/3/2014 | |
| L-8-14 | 20 | L-8-14_20 | 11/3/2014 | |
| L-8-14 | 24 | L-8-14_24 | 11/3/2014 | |
| L-8-14 | 28 | L-8-14_28 | 11/3/2014 | |
| L-8-14 | 32 | L-8-14_32 | 11/3/2014 | |
| L-8-14 | 36 | L-8-14_36 | 11/3/2014 | |
| L-8-14 | 40 | L-8-14_41 | 11/3/2014 | |
| L-8-14 | 44 | L-8-14_44 | 11/3/2014 | X |
| L-8-14 | 48 | L-8-14_48 | 11/3/2014 | X |
| L-8-14 | 52 | L-8-14_55 | 11/3/2014 | X |
| L-8-14 | 56 | L-8-14_56 | 11/3/2014 | X |
| L-12-14 | 4 | L-12-14_4 | 11/6/2014 | |
| L-12-14 | 8 | L-12-14_8 | 11/6/2014 | |
| L-12-14 | 12 | L-12-14_12 | 11/6/2014 | |
| L-12-14 | 16 | L-12-14_16 | 11/6/2014 | |
| L-12-14 | 20 | L-12-14_20 | 11/6/2014 | |
| L-12-14 | 24 | L-12-14_24 | 11/6/2014 | |
| L-12-14 | 28 | L-12-14_28 | 11/6/2014 | |
| L-12-14 | 32 | L-12-14_32 | 11/6/2014 | |
| L-12-14 | 36 | L-12-14_36 | 11/6/2014 | |
| L-12-14 | 40 | L-12-14_40 | 11/6/2014 | |
| L-12-14 | 42 | L-12-14_42 | 11/6/2014 | |
| L-12-14 | 44 | L-12-14_44 | 11/6/2014 | X |
| L-12-14 | 45 | L-12-14_45 | 11/6/2014 | |
| L-12-14 | 48 | L-12-14_48 | 11/6/2014 | |
| L-12-14 | 52 | L-12-14_52 | 11/6/2014 | |
| L-12-14 | 56 | L-12-14_56 | 11/6/2014 | |

Notes and Abbreviations on last page.

Table 2. Volatile Organic Compounds Sample Details, Park Soil Pre-Design Sampling,
Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID | Sample Midpoint Depth (ft bbls) | Sample ID | Date Sampled | VOC Fixed Base Lab Analysis ⁽²⁾ |
|-----------|---------------------------------|------------|--------------|--|
| N-12-14 | 4 | N-12-14_4 | 11/6/2014 | |
| N-12-14 | 8 | N-12-14_8 | 11/6/2014 | |
| N-12-14 | 12 | N-12-14_12 | 11/6/2014 | |
| N-12-14 | 16 | N-12-14_16 | 11/6/2014 | |
| N-12-14 | 20 | N-12-14_20 | 11/6/2014 | |
| N-12-14 | 24 | N-12-14_24 | 11/6/2014 | |
| N-12-14 | 28 | N-12-14_28 | 11/6/2014 | |
| N-12-14 | 32 | N-12-14_32 | 11/6/2014 | |
| N-12-14 | 36 | N-12-14_36 | 11/6/2014 | |
| N-12-14 | 40 | N-12-14_40 | 11/6/2014 | |
| N-12-14 | 44 | N-12-14_44 | 11/6/2014 | |
| N-12-14 | 48 | N-12-14_48 | 11/6/2014 | X |
| N-12-14 | 52 | N-12-14_52 | 11/6/2014 | |
| N-12-14 | 56 | N-12-14_56 | 11/6/2014 | |
| N-12-14 | 58 | N-12-14_58 | 11/6/2014 | |
| P-7-14 | 4 | P-7-14_4 | 11/5/2014 | |
| P-7-14 | 8 | P-7-14_8 | 11/5/2014 | |
| P-7-14 | 12 | P-7-14_12 | 11/5/2014 | |
| P-7-14 | 16 | P-7-14_16 | 11/5/2014 | |
| P-7-14 | 20 | P-7-14_20 | 11/5/2014 | |
| P-7-14 | 24 | P-7-14_24 | 11/5/2014 | |
| P-7-14 | 28 | P-7-14_28 | 11/5/2014 | |
| P-7-14 | 32 | P-7-14_32 | 11/5/2014 | |
| P-7-14 | 36 | P-7-14_36 | 11/5/2014 | |
| P-7-14 | 40 | P-7-14_40 | 11/5/2014 | |
| P-7-14 | 44 | P-7-14_44 | 11/5/2014 | |
| P-7-14 | 48 | P-7-14_48 | 11/5/2014 | |
| P-7-14 | 52 | P-7-14_52 | 11/5/2014 | |
| P-7-14 | 56 | P-7-14_56 | 11/5/2014 | X |
| P-12-14 | 4 | P-12-14_4 | 11/5/2014 | |
| P-12-14 | 7 | P-12-14_7 | 11/5/2014 | |
| P-12-14 | 12 | P-12-14_12 | 11/5/2014 | |
| P-12-14 | 16 | P-12-14_16 | 11/5/2014 | |
| P-12-14 | 20 | P-12-14_20 | 11/5/2014 | |
| P-12-14 | 24 | P-12-14_24 | 11/5/2014 | |
| P-12-14 | 28 | P-12-14_28 | 11/5/2014 | |
| P-12-14 | 32 | P-12-14_32 | 11/5/2014 | |
| P-12-14 | 36 | P-12-14_36 | 11/5/2014 | X |
| P-12-14 | 40 | P-12-14_40 | 11/5/2014 | |
| P-12-14 | 44 | P-12-14_44 | 11/5/2014 | X |
| P-12-14 | 48 | P-12-14_48 | 11/5/2014 | |
| P-12-14 | 51 | P-12-14_51 | 11/5/2014 | |
| P-12-14 | 53 | P-12-14_53 | 11/5/2014 | X |
| P-12-14 | 55 | P-12-14_55 | 11/5/2014 | |
| Q-8-14 | 4 | Q-8-14_4 | 11/5/2014 | |
| Q-8-14 | 8 | Q-8-14_8 | 11/5/2014 | |
| Q-8-14 | 16 | Q-8-14_16 | 11/5/2014 | |
| Q-8-14 | 20 | Q-8-14_20 | 11/5/2014 | |
| Q-8-14 | 24 | Q-8-14_24 | 11/5/2014 | X |
| Q-8-14 | 28 | Q-8-14_28 | 11/5/2014 | |
| Q-8-14 | 32 | Q-8-14_32 | 11/5/2014 | |
| Q-8-14 | 36 | Q-8-14_36 | 11/5/2014 | |
| Q-8-14 | 40 | Q-8-14_40 | 11/5/2014 | |
| Q-8-14 | 44 | Q-8-14_44 | 11/5/2014 | X |
| Q-8-14 | 48 | Q-8-14_48 | 11/5/2014 | |
| Q-8-14 | 52 | Q-8-14_52 | 11/5/2014 | |

Notes and Abbreviations on last page.

Table 2. Volatile Organic Compounds Sample Details, Park Soil Pre-Design Sampling,
Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID | Sample Midpoint Depth (ft bbls) | Sample ID | Date Sampled | VOC Fixed Base Lab Analysis ⁽²⁾ |
|-----------|---------------------------------|-------------|--------------|--|
| G-8-14 | 4 | G-8-14_4 | 11/6/2014 | |
| G-8-14 | 8 | G-8-14_8 | 11/6/2014 | |
| G-8-14 | 12 | G-8-14_12 | 11/6/2014 | |
| G-8-14 | 16 | G-8-14_16 | 11/6/2014 | |
| G-8-14 | 20 | G-8-14_20 | 11/6/2014 | |
| G-8-14 | 24 | G-8-14_24 | 11/6/2014 | |
| G-8-14 | 28 | G-8-14_28 | 11/6/2014 | X |
| H-7-14 | 4 | H-7-14_4 | 11/3/2014 | |
| H-7-14 | 8 | H-7-14_8 | 11/3/2014 | |
| H-7-14 | 12 | H-7-14_12 | 11/3/2014 | |
| H-7-14 | 16 | H-7-14_16 | 11/3/2014 | |
| H-7-14 | 20 | H-7-14_20 | 11/3/2014 | |
| H-7-14 | 24 | H-7-14_22 | 11/3/2014 | |
| H-7-14 | 28 | H-7-14_28 | 11/3/2014 | |
| I-2-14 | 22 | I-2-14_22 | 11/6/2014 | |
| I-2-14 | 26 | I-2-14_26 | 11/6/2014 | |
| I-2-14 | 30 | I-2-14_30 | 11/6/2014 | |
| I-2-14 | 34 | I-2-14_34 | 11/6/2014 | |
| I-2-14 | 38 | I-2-14_38 | 11/6/2014 | |
| I-2-14 | 42 | I-2-14_42 | 11/6/2014 | |
| I-2-14 | 46 | I-2-14_46 | 11/6/2014 | X |
| I-2-14 | 50 | I-2-14_50 | 11/6/2014 | X |
| J-4-14 | 22 | J-4-14_22 | 11/7/2014 | |
| J-4-14 | 26 | J-4-14_26 | 11/7/2014 | |
| J-4-14 | 30 | J-4-14_30 | 11/7/2014 | |
| J-4-14 | 34 | J-4-14_34 | 11/7/2014 | |
| J-4-14 | 38 | J-4-14_38 | 11/7/2014 | |
| J-4-14 | 42 | J-4-14_42 | 11/7/2014 | |
| J-4-14 | 46 | J-4-14_46 | 11/7/2014 | X |
| J-4-14 | 50 | J-4-14_50 | 11/7/2014 | X |
| K-10-14 | 4 | K-10-14_4 | 11/7/2014 | |
| K-10-14 | 8 | K-10-14_8 | 11/7/2014 | |
| K-10-14 | 12 | K-10-14_12 | 11/7/2014 | |
| K-10-14 | 16 | K-10-14_16 | 11/7/2014 | |
| K-10-14 | 20 | K-10-14_20 | 11/7/2014 | |
| K-10-14 | 24 | K-10-14_24 | 11/7/2014 | |
| K-10-14 | 28 | K-10-14_28 | 11/7/2014 | |
| K-10-14 | 32 | K-10-14_32 | 11/7/2014 | |
| K-10-14 | 36 | K-10-14_36 | 11/7/2014 | |
| K-10-14 | 40 | K-10-14_40 | 11/7/2014 | |
| K-10-14 | 44 | K-10-14_44 | 11/7/2014 | |
| K-10-14 | 48 | K-10-14_48 | 11/7/2014 | |
| K-10-14 | 52 | K-10-14_52 | 11/7/2014 | X |
| nL-10-14 | 4 | nL-10-14_4 | 11/3/2014 | |
| nL-10-14 | 8 | nL-10-14_8 | 11/3/2014 | |
| nL-10-14 | 12 | nL-10-14_12 | 11/3/2014 | |
| nL-10-14 | 16 | nL-10-14_16 | 11/3/2014 | |
| nL-10-14 | 20 | nL-10-14_20 | 11/3/2014 | |
| nL-10-14 | 24 | nL-10-14_24 | 11/3/2014 | |
| nL-10-14 | 28 | nL-10-14_28 | 11/3/2014 | |

Notes and Abbreviations on last page.

Table 2. Volatile Organic Compounds Sample Details, Park Soil Pre-Design Sampling,
Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID | Sample Midpoint Depth (ft bbls) | Sample ID | Date Sampled | VOC Fixed Base Lab Analysis ⁽²⁾ |
|-----------|---------------------------------|-----------|--------------|--|
| P-9-14 | 4 | P-9-14_4 | 11/6/2014 | |
| P-9-14 | 8 | P-9-14_8 | 11/6/2014 | |
| P-9-14 | 12 | P-9-14_12 | 11/6/2014 | |
| P-9-14 | 14 | P-9-14_14 | 11/6/2014 | |
| P-9-14 | 16 | P-9-14_16 | 11/6/2014 | X |
| P-9-14 | 20 | P-9-14_20 | 11/6/2014 | X |
| P-9-14 | 24 | P-9-14_24 | 11/6/2014 | |
| P-9-14 | 28 | P-9-14_28 | 11/6/2014 | |
| P-9-14 | 32 | P-9-14_32 | 11/6/2014 | X |
| P-9-14 | 36 | P-9-14_36 | 11/7/2014 | |
| P-9-14 | 38 | P-9-14_38 | 11/7/2014 | |
| P-9-14 | 40 | P-9-14_40 | 11/7/2014 | |
| P-9-14 | 44 | P-9-14_44 | 11/7/2014 | X |
| P-9-14 | 45 | P-9-14_45 | 11/7/2014 | |
| P-9-14 | 48 | P-9-14_48 | 11/7/2014 | |
| P-9-14 | 50 | P-9-14_50 | 11/7/2014 | |
| P-9-14 | 52 | P-9-14_52 | 11/7/2014 | |
| H-5-14 | 22 | H-5-14_22 | 11/7/2014 | |
| H-5-14 | 26 | H-5-14_26 | 11/7/2014 | |
| H-5-14 | 30 | H-5-14_30 | 11/7/2014 | |
| H-5-14 | 34 | H-5-14_34 | 11/7/2014 | |
| H-5-14 | 38 | H-5-14_38 | 11/7/2014 | |
| H-5-14 | 42 | H-5-14_42 | 11/7/2014 | |
| H-5-14 | 46 | H-5-14_46 | 11/7/2014 | X |
| H-5-14 | 50 | H-5-14_50 | 11/7/2014 | X |
| M-9-14 | 4 | M-9-14_4 | 11/5/2014 | |
| M-9-14 | 8 | M-9-14_8 | 11/5/2014 | |
| M-9-14 | 9 | M-9-14_9 | 11/5/2014 | |
| M-9-14 | 12 | M-9-14_12 | 11/5/2014 | |
| M-9-14 | 16 | M-9-14_16 | 11/5/2014 | |
| M-9-14 | 20 | M-9-14_20 | 11/5/2014 | |
| M-9-14 | 24 | M-9-14_24 | 11/5/2014 | |
| M-9-14 | 28 | M-9-14_28 | 11/5/2014 | |
| M-9-14 | 31 | M-9-14_31 | 11/5/2014 | |
| M-9-14 | 34 | M-9-14_34 | 11/5/2014 | |
| M-9-14 | 36 | M-9-14_36 | 11/5/2014 | |
| M-9-14 | 40 | M-9-14_40 | 11/5/2014 | |
| M-9-14 | 43 | M-9-14_43 | 11/5/2014 | |
| M-9-14 | 45 | M-9-14_45 | 11/5/2014 | |
| M-9-14 | 46 | M-9-14_46 | 11/5/2014 | X |
| M-9-14 | 49 | M-9-14_49 | 11/5/2014 | |
| M-9-14 | 51 | M-9-14_51 | 11/5/2014 | |
| M-9-14 | 54 | M-9-14_54 | 11/5/2014 | |
| M-9-14 | 57 | M-9-14_57 | 11/5/2014 | X |

Notes and Abbreviations on last page.

Table 2. Volatile Organic Compounds Sample Details, Park Soil Pre-Design Sampling,
Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID | Sample Midpoint Depth (ft bbls) | Sample ID | Date Sampled | VOC Fixed Base Lab Analysis ⁽²⁾ |
|---|---------------------------------|---------------|--------------|--|
| <i>Additional Borings completed per Work Plan Addendum</i> | | | | |
| B-34-14 | 1.5 | B-34-14_1.5 | 11/17/2014 | X |
| B-34-14 | 4.5 | B-34-14_4.5 | 11/17/2014 | X |
| B-34-14 | 7.5 | B-34-14_7.5 | 11/17/2014 | X |
| B-34-14 | 10.5 | B-34-14_10.5 | 11/17/2014 | X |
| B-34-14 | 13.5 | B-34-14_13.5 | 11/17/2014 | X |
| B-34-14 | 16.5 | B-34-14_16.5 | 11/17/2014 | X |
| B-34-14 | 19.5 | B-34-14_19.5 | 11/17/2014 | X |
| B-34-14 | 22.5 | B-34-14_22.5 | 11/17/2014 | X |
| B-34-14 | 25.5 | B-34-14_25.5 | 11/17/2014 | X |
| B-34-14 | 28.5 | B-34-14_28.5 | 11/17/2014 | X |
| B-34-14 | 31.5 | B-34-14_31.5 | 11/17/2014 | X |
| B-34-14 | 34.5 | B-34-14_34.5 | 11/17/2014 | X |
| B-34-14 | 37.5 | B-34-14_37.5 | 11/17/2014 | X |
| B-34-14 | 40.5 | B-34-14_40.5 | 11/17/2014 | X |
| B-34-14 | 43.5 | B-34-14_43.5 | 11/17/2014 | X |
| B-34-14 | 46.5 | B-34-14_46.5 | 11/17/2014 | X |
| B-34-14 | 49.5 | B-34-14_49.5 | 11/17/2014 | X |
| B-34-14 | 52.5 | B-34-14_52.5 | 11/17/2014 | X |
| B-34-14 | 55.5 | B-34-14_55.5 | 11/17/2014 | X |
| B-34-14 | 58.5 | B-34-14_58.5 | 11/17/2014 | X |
| B-60-14 | 1.5 | B-60-14_1.5 | 11/17/2014 | X |
| B-60-14 | 4.5 | B-60-14_4.5 | 11/17/2014 | X |
| B-60-14 | 7.5 | B-60-14_7.5 | 11/17/2014 | X |
| B-60-14 | 10.5 | B-60-14_10.5 | 11/17/2014 | X |
| B-60-14 | 13.5 | B-60-14_13.5 | 11/17/2014 | X |
| B-60-14 | 16.5 | B-60-14_16.5 | 11/17/2014 | X |
| B-60-14 | 19.5 | B-60-14_19.5 | 11/17/2014 | X |
| B-60-14 | 22.5 | B-60-14_22.5 | 11/17/2014 | X |
| B-60-14 | 25.5 | B-60-14_25.5 | 11/17/2014 | X |
| B-60-14 | 28.5 | B-60-14_28.5 | 11/17/2014 | X |
| VP-27-14 | 1.5 | VP-27-14_1.5 | 11/17/2014 | X |
| VP-27-14 | 4.5 | VP-27-14_4.5 | 11/17/2014 | X |
| VP-27-14 | 7.5 | VP-27-14_7.5 | 11/17/2014 | X |
| VP-27-14 | 10.5 | VP-27-14_10.5 | 11/17/2014 | X |
| VP-27-14 | 13.5 | VP-27-14_13.5 | 11/17/2014 | X |
| VP-27-14 | 16.5 | VP-27-14_16.5 | 11/17/2014 | X |
| VP-27-14 | 19.5 | VP-27-14_19.5 | 11/17/2014 | X |
| VP-27-14 | 22.5 | VP-27-14_22.5 | 11/17/2014 | X |
| VP-27-14 | 25.5 | VP-27-14_25.5 | 11/17/2014 | X |
| VP-27-14 | 28.5 | VP-27-14_28.5 | 11/17/2014 | X |
| VP-27-14 | 31.5 | VP-27-14_31.5 | 11/17/2014 | X |
| VP-27-14 | 34.5 | VP-27-14_34.5 | 11/17/2014 | X |
| VP-27-14 | 37.5 | VP-27-14_37.5 | 11/17/2014 | X |
| VP-27-14 | 40.5 | VP-27-14_40.5 | 11/17/2014 | X |
| VP-27-14 | 43.5 | VP-27-14_43.5 | 11/17/2014 | X |
| VP-27-14 | 46.5 | VP-27-14_46.5 | 11/17/2014 | X |
| VP-27-14 | 49.5 | VP-27-14_49.5 | 11/17/2014 | X |
| VP-27-14 | 52.5 | VP-27-14_52.5 | 11/17/2014 | X |
| VP-27-14 | 55.5 | VP-27-14_55.5 | 11/17/2014 | X |
| VP-27-14 | 58.5 | VP-27-14_58.5 | 11/17/2014 | X |

Notes and Abbreviations on last page.

Table 2. Volatile Organic Compounds Sample Details, Park Soil Pre-Design Sampling,
Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID | Sample Midpoint Depth (ft bbls) | Sample ID | Date Sampled | VOC Fixed Base Lab Analysis ⁽²⁾ |
|-----------|---------------------------------|----------------|--------------|--|
| F-4-14 | 1.5 | F-4-14_1.5 | 12/15/2014 | |
| F-4-14 | 4.5 | F-4-14_4.5 | 12/15/2014 | |
| F-4-14 | 7.5 | F-4-14_7.5 | 12/15/2014 | |
| F-4-14 | 10.5 | F-4-14_10.5 | 12/15/2014 | |
| F-4-14 | 13.5 | F-4-14_13.5 | 12/15/2014 | |
| F-4-14 | 16.5 | F-4-14_16.5 | 12/15/2014 | |
| F-4-14 | 19.5 | F-4-14_19.5 | 12/15/2014 | |
| F-4-14 | 22.5 | F-4-14_22.5 | 12/15/2014 | |
| F-4-14 | 25.5 | F-4-14_25.5 | 12/15/2014 | |
| F-4-14 | 28.5 | F-4-14_28.5 | 12/15/2014 | |
| F-9-14 | 1.5 | F-9-14_1.5 | 12/15/2014 | |
| F-9-14 | 4.5 | F-9-14_4.5 | 12/15/2014 | |
| F-9-14 | 7.5 | F-9-14_7.5 | 12/15/2014 | |
| F-9-14 | 10.5 | F-9-14_10.5 | 12/15/2014 | |
| F-9-14 | 13.5 | F-9-14_13.5 | 12/15/2014 | |
| nK-7-14 | 31.5 | nK-7-14_31.5 | 12/15/2014 | |
| nK-7-14 | 34.5 | nK-7-14_34.5 | 12/15/2014 | |
| nK-7-14 | 37.5 | nK-7-14_37.5 | 12/15/2014 | |
| nK-7-14 | 40.5 | nK-7-14_40.5 | 12/15/2014 | |
| nK-7-14 | 43.5 | nK-7-14_43.5 | 12/15/2014 | |
| nK-7-14 | 46.5 | nK-7-14_46.5 | 12/15/2014 | |
| nK-7-14 | 49.5 | nK-7-14_49.5 | 12/15/2014 | |
| nK-7-14 | 52.5 | nK-7-14_52.5 | 12/15/2014 | |
| nK-7-14 | 55.5 | nK-7-14_55.5 | 12/15/2014 | |
| nK-7-14 | 58.5 | nK-7-14_58.5 | 12/15/2014 | |
| nQ-13-14R | 31.5 | nQ-13-14R_31.5 | 12/16/2014 | |
| nQ-13-14R | 34.5 | nQ-13-14R_34.5 | 12/16/2014 | |
| nQ-13-14R | 37.5 | nQ-13-14R_37.5 | 12/16/2014 | |
| nQ-13-14R | 40.5 | nQ-13-14R_40.5 | 12/16/2014 | |
| nQ-13-14R | 43.5 | nQ-13-14R_43.5 | 12/16/2014 | |
| nQ-13-14R | 46.5 | nQ-13-14R_46.5 | 12/16/2014 | |
| nQ-13-14R | 49.5 | nQ-13-14R_49.5 | 12/16/2014 | |
| nQ-13-14R | 52.5 | nQ-13-14R_52.5 | 12/16/2014 | |
| nQ-13-14R | 55.5 | nQ-13-14R_55.5 | 12/16/2014 | |
| nQ-13-14R | 58.5 | nQ-13-14R_58.5 | 12/16/2014 | |
| nR-10-14 | 1.5 | nR-10-14_1.5 | 12/16/2014 | |
| nR-10-14 | 4.5 | nR-10-14_4.5 | 12/16/2014 | |
| nR-10-14 | 7.5 | nR-10-14_7.5 | 12/16/2014 | |
| nR-10-14 | 10.5 | nR-10-14_10.5 | 12/16/2014 | |
| nR-10-14 | 13.5 | nR-10-14_13.5 | 12/16/2014 | |
| nR-10-14 | 16.5 | nR-10-14_16.5 | 12/16/2014 | |
| nR-10-14 | 19.5 | nR-10-14_19.5 | 12/16/2014 | |
| nR-10-14 | 22.5 | nR-10-14_22.5 | 12/16/2014 | |
| nR-10-14 | 25.5 | nR-10-14_25.5 | 12/16/2014 | |
| nR-10-14 | 28.5 | nR-10-14_28.5 | 12/16/2014 | |
| nR-10-14 | 31.5 | nR-10-14_31.5 | 12/16/2014 | |
| nR-10-14 | 34.5 | nR-10-14_34.5 | 12/16/2014 | |
| nR-10-14 | 37.5 | nR-10-14_37.5 | 12/16/2014 | |
| nR-10-14 | 40.5 | nR-10-14_40.5 | 12/16/2014 | |
| nR-10-14 | 43.5 | nR-10-14_43.5 | 12/16/2014 | |
| nR-10-14 | 46.5 | nR-10-14_46.5 | 12/16/2014 | |
| nR-10-14 | 49.5 | nR-10-14_49.5 | 12/16/2014 | |
| nR-10-14 | 52.5 | nR-10-14_52.5 | 12/16/2014 | |
| nR-10-14 | 55.5 | nR-10-14_55.5 | 12/16/2014 | |
| nR-10-14 | 58.5 | nR-10-14_58.5 | 12/16/2014 | |

Notes and Abbreviations on last page.

Table 2. Volatile Organic Compounds Sample Details, Park Soil Pre-Design Sampling,
Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID | Sample Midpoint Depth (ft bbls) | Sample ID | Date Sampled | VOC Fixed Base Lab Analysis ⁽²⁾ |
|-----------|---------------------------------|----------------|--------------|--|
| nG-2-14 | 1.5 | nG-2-14_1.5 | 12/17/2014 | |
| nG-2-14 | 4.5 | nG-2-14_4.5 | 12/17/2014 | |
| nG-2-14 | 7.5 | nG-2-14_7.5 | 12/17/2014 | |
| nG-2-14 | 10.5 | nG-2-14_10.5 | 12/17/2014 | |
| nG-2-14 | 13.5 | nG-2-14_13.5 | 12/17/2014 | |
| nG-2-14 | 16.5 | nG-2-14_16.5 | 12/17/2014 | |
| nG-2-14 | 19.5 | nG-2-14_19.5 | 12/17/2014 | |
| nG-2-14 | 22.5 | nG-2-14_22.5 | 12/17/2014 | |
| nG-2-14 | 25.5 | nG-2-14_25.5 | 12/17/2014 | |
| nG-2-14 | 28.5 | nG-2-14_28.5 | 12/17/2014 | |
| nG-2-14 | 31.5 | nG-2-14_31.5 | 12/18/2014 | |
| nG-2-14 | 34.5 | nG-2-14_34.5 | 12/18/2014 | |
| nG-2-14 | 37.5 | nG-2-14_37.5 | 12/18/2014 | |
| nG-2-14 | 40.5 | nG-2-14_40.5 | 12/18/2014 | |
| nG-2-14 | 43.5 | nG-2-14_43.5 | 12/18/2014 | |
| nG-2-14 | 46.5 | nG-2-14_46.5 | 12/18/2014 | |
| nG-2-14 | 49.5 | nG-2-14_49.5 | 12/18/2014 | |
| nG-2-14 | 52.5 | nG-2-14_52.5 | 12/18/2014 | |
| nG-2-14 | 55.5 | nG-2-14_55.5 | 12/18/2014 | |
| nG-2-14 | 58.5 | nG-2-14_58.5 | 12/18/2014 | |
| nG-6-14 | 1.5 | nG-6-14_1.5 | 12/17/2014 | |
| nG-6-14 | 4.5 | nG-6-14_4.5 | 12/17/2014 | |
| nG-6-14 | 7.5 | nG-6-14_7.5 | 12/17/2014 | |
| nG-6-14 | 10.5 | nG-6-14_10.5 | 12/17/2014 | |
| nG-6-14 | 13.5 | nG-6-14_13.5 | 12/17/2014 | |
| nG-6-14 | 16.5 | nG-6-14_16.5 | 12/17/2014 | |
| nG-6-14 | 19.5 | nG-6-14_19.5 | 12/17/2014 | |
| nG-6-14 | 22.5 | nG-6-14_22.5 | 12/17/2014 | |
| nG-6-14 | 25.5 | nG-6-14_25.5 | 12/17/2014 | |
| nG-6-14 | 28.5 | nG-6-14_28.5 | 12/17/2014 | |
| F-6-14 | 1.5 | F-6-14_1.5 | 12/17/2014 | |
| F-6-14 | 4.5 | F-6-14_4.5 | 12/17/2014 | |
| F-6-14 | 7.5 | F-6-14_7.5 | 12/17/2014 | |
| F-6-14 | 10.5 | F-6-14_10.5 | 12/17/2014 | |
| F-6-14 | 13.5 | F-6-14_13.5 | 12/17/2014 | |
| F-6-14 | 16.5 | F-6-14_16.5 | 12/17/2014 | |
| F-6-14 | 19.5 | F-6-14_19.5 | 12/17/2014 | |
| F-6-14 | 22.5 | F-6-14_22.5 | 12/17/2014 | |
| F-6-14 | 25.5 | F-6-14_25.5 | 12/17/2014 | |
| F-6-14 | 28.5 | F-6-14_28.5 | 12/17/2014 | |
| nL-10-14R | 31.5 | nL-10-14R_31.5 | 12/16/2014 | |
| nL-10-14R | 34.5 | nL-10-14R_34.5 | 12/16/2014 | |
| nL-10-14R | 37.5 | nL-10-14R_37.5 | 12/16/2014 | |
| nL-10-14R | 40.5 | nL-10-14R_40.5 | 12/16/2014 | |
| nL-10-14R | 43.5 | nL-10-14R_43.5 | 12/16/2014 | |
| nL-10-14R | 46.5 | nL-10-14R_46.5 | 12/16/2014 | |
| nL-10-14R | 49.5 | nL-10-14R_49.5 | 12/16/2014 | |
| nL-10-14R | 52.5 | nL-10-14R_52.5 | 12/16/2014 | |
| nL-10-14R | 55.5 | nL-10-14R_55.5 | 12/16/2014 | |
| nL-10-14R | 58.5 | nL-10-14R_58.5 | 12/16/2014 | |

Notes and Abbreviations on last page.

Table 2. Volatile Organic Compounds Sample Details, Park Soil Pre-Design Sampling,
Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID | Sample Midpoint Depth (ft bbls) | Sample ID | Date Sampled | VOC Fixed Base Lab Analysis ⁽²⁾ |
|-----------|---------------------------------|---------------|--------------|--|
| nM-10-14 | 1.5 | nM-10-14_1.5 | 12/16/2014 | |
| nM-10-14 | 4.5 | nM-10-14_4.5 | 12/16/2014 | |
| nM-10-14 | 7.5 | nM-10-14_7.5 | 12/16/2014 | |
| nM-10-14 | 10.5 | nM-10-14_10.5 | 12/16/2014 | |
| nM-10-14 | 13.5 | nM-10-14_13.5 | 12/16/2014 | |
| nM-10-14 | 16.5 | nM-10-14_16.5 | 12/16/2014 | |
| nM-10-14 | 19.5 | nM-10-14_19.5 | 12/16/2014 | |
| nM-10-14 | 22.5 | nM-10-14_22.5 | 12/16/2014 | |
| nM-10-14 | 25.5 | nM-10-14_25.5 | 12/16/2014 | |
| nM-10-14 | 28.5 | nM-10-14_28.5 | 12/16/2014 | |
| nM-10-14 | 31.5 | nM-10-14_31.5 | 12/16/2014 | |
| nM-10-14 | 34.5 | nM-10-14_34.5 | 12/16/2014 | |
| nM-10-14 | 37.5 | nM-10-14_37.5 | 12/16/2014 | |
| nM-10-14 | 40.5 | nM-10-14_40.5 | 12/16/2014 | |
| nM-10-14 | 43.5 | nM-10-14_43.5 | 12/16/2014 | |
| nM-10-14 | 46.5 | nM-10-14_46.5 | 12/16/2014 | |
| nM-10-14 | 49.5 | nM-10-14_49.5 | 12/16/2014 | |
| nM-10-14 | 52.5 | nM-10-14_52.5 | 12/16/2014 | |
| nM-10-14 | 55.5 | nM-10-14_55.5 | 12/16/2014 | |
| nM-10-14 | 58.5 | nM-10-14_58.5 | 12/16/2014 | |
| nM-11-14 | 1.5 | nM-11-14_1.5 | 12/17/2014 | |
| nM-11-14 | 4.5 | nM-11-14_4.5 | 12/17/2014 | |
| nM-11-14 | 7.5 | nM-11-14_7.5 | 12/17/2014 | |
| nM-11-14 | 10.5 | nM-11-14_10.5 | 12/17/2014 | |
| nM-11-14 | 13.5 | nM-11-14_13.5 | 12/17/2014 | |
| nM-11-14 | 16.5 | nM-11-14_16.5 | 12/17/2014 | |
| nM-11-14 | 19.5 | nM-11-14_19.5 | 12/17/2014 | |
| nM-11-14 | 22.5 | nM-11-14_22.5 | 12/17/2014 | |
| nM-11-14 | 25.5 | nM-11-14_25.5 | 12/17/2014 | |
| nM-11-14 | 28.5 | nM-11-14_28.5 | 12/17/2014 | |
| nM-11-14 | 31.5 | nM-11-14_31.5 | 12/17/2014 | |
| nM-11-14 | 34.5 | nM-11-14_34.5 | 12/17/2014 | |
| nM-11-14 | 37.5 | nM-11-14_37.5 | 12/17/2014 | |
| nM-11-14 | 40.5 | nM-11-14_40.5 | 12/17/2014 | |
| nM-11-14 | 43.5 | nM-11-14_43.5 | 12/17/2014 | |
| nM-11-14 | 46.5 | nM-11-14_46.5 | 12/17/2014 | |
| nM-11-14 | 49.5 | nM-11-14_49.5 | 12/17/2014 | |
| nM-11-14 | 52.5 | nM-11-14_52.5 | 12/17/2014 | |
| nM-11-14 | 55.5 | nM-11-14_55.5 | 12/17/2014 | |
| nM-11-14 | 58.5 | nM-11-14_58.5 | 12/17/2014 | |
| nN-9-14 | 1.5 | nN-9-14_1.5 | 12/17/2014 | X |
| nN-9-14 | 4.5 | nN-9-14_4.5 | 12/17/2014 | X |
| nN-9-14 | 7.5 | nN-9-14_7.5 | 12/17/2014 | X |
| nN-9-14 | 10.5 | nN-9-14_10.5 | 12/17/2014 | X |
| nN-9-14 | 13.5 | nN-9-14_13.5 | 12/17/2014 | X |
| nN-9-14 | 16.5 | nN-9-14_16.5 | 12/17/2014 | X |
| nN-9-14 | 19.5 | nN-9-14_19.5 | 12/17/2014 | X |
| nN-9-14 | 22.5 | nN-9-14_22.5 | 12/17/2014 | X |
| nN-9-14 | 25.5 | nN-9-14_25.5 | 12/17/2014 | X |
| nN-9-14 | 28.5 | nN-9-14_28.5 | 12/17/2014 | X |
| nN-9-14 | 31.5 | nN-9-14_31.5 | 12/17/2014 | X |
| nN-9-14 | 40.5 | nN-9-14_40.5 | 12/17/2014 | X |
| nN-9-14 | 43.5 | nN-9-14_43.5 | 12/17/2014 | X |
| nN-9-14 | 46.5 | nN-9-14_46.5 | 12/17/2014 | X |
| nN-9-14 | 49.5 | nN-9-14_49.5 | 12/17/2014 | X |
| nN-9-14 | 52.5 | nN-9-14_52.5 | 12/17/2014 | X |
| nN-9-14 | 55.5 | nN-9-14_55.5 | 12/17/2014 | X |
| nN-9-14 | 58.5 | nN-9-14_58.5 | 12/17/2014 | X |

Notes and Abbreviations on last page.

Table 2. Volatile Organic Compounds Sample Details, Park Soil Pre-Design Sampling,
Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID | Sample Midpoint Depth (ft bbls) | Sample ID | Date Sampled | VOC Fixed Base Lab Analysis ⁽²⁾ |
|---------------------------|---------------------------------|----------------|--------------|--|
| O-8-14 | 1.5 | O-8-14_1.5 | 12/17/2014 | X |
| O-8-14 | 4.5 | O-8-14_4.5 | 12/17/2014 | X |
| O-8-14 | 7.5 | O-8-14_7.5 | 12/17/2014 | |
| O-8-14 | 10.5 | O-8-14_10.5 | 12/17/2014 | |
| O-8-14 | 13.5 | O-8-14_13.5 | 12/17/2014 | |
| O-8-14 | 16.5 | O-8-14_16.5 | 12/17/2014 | |
| O-8-14 | 19.5 | O-8-14_19.5 | 12/17/2014 | |
| O-8-14 | 22.5 | O-8-14_22.5 | 12/17/2014 | |
| O-8-14 | 25.5 | O-8-14_25.5 | 12/17/2014 | |
| O-8-14 | 28.5 | O-8-14_28.5 | 12/17/2014 | |
| O-8-14 | 31.5 | O-8-14_31.5 | 12/17/2014 | |
| O-8-14 | 34.5 | O-8-14_34.5 | 12/17/2014 | |
| O-8-14 | 37.5 | O-8-14_37.5 | 12/17/2014 | |
| O-8-14 | 40.5 | O-8-14_40.5 | 12/17/2014 | |
| O-8-14 | 43.5 | O-8-14_43.5 | 12/17/2014 | |
| O-8-14 | 46.5 | O-8-14_46.5 | 12/17/2014 | |
| O-8-14 | 49.5 | O-8-14_49.5 | 12/17/2014 | |
| O-8-14 | 52.5 | O-8-14_52.5 | 12/17/2014 | |
| O-8-14 | 55.5 | O-8-14_55.5 | 12/17/2014 | |
| O-8-14 | 58.5 | O-8-14_58.5 | 12/17/2014 | |
| Q-9-14 | 1.5 | Q-9-14_1.5 | 12/17/2014 | |
| Q-9-14 | 4.5 | Q-9-14_4.5 | 12/17/2014 | |
| Q-9-14 | 7.5 | Q-9-14_7.5 | 12/17/2014 | |
| Q-9-14 | 10.5 | Q-9-14_10.5 | 12/17/2014 | |
| Q-9-14 | 13.5 | Q-9-14_13.5 | 12/17/2014 | |
| Q-9-14 | 16.5 | Q-9-14_16.5 | 12/17/2014 | |
| Q-9-14 | 19.5 | Q-9-14_19.5 | 12/17/2014 | |
| Q-9-14 | 22.5 | Q-9-14_22.5 | 12/17/2014 | |
| Q-9-14 | 25.5 | Q-9-14_25.5 | 12/17/2014 | |
| Q-9-14 | 28.5 | Q-9-14_28.5 | 12/17/2014 | |
| Q-9-14 | 31.5 | Q-9-14_31.5 | 12/17/2014 | |
| Q-9-14 | 34.5 | Q-9-14_34.5 | 12/17/2014 | |
| Q-9-14 | 37.5 | Q-9-14_37.5 | 12/17/2014 | |
| Q-9-14 | 40.5 | Q-9-14_40.5 | 12/17/2014 | |
| Q-9-14 | 43.5 | Q-9-14_43.5 | 12/17/2014 | |
| Q-9-14 | 46.5 | Q-9-14_46.5 | 12/17/2014 | |
| Q-9-14 | 49.5 | Q-9-14_49.5 | 12/17/2014 | |
| Q-9-14 | 52.5 | Q-9-14_52.5 | 12/17/2014 | |
| Q-9-14 | 55.5 | Q-9-14_55.5 | 12/17/2014 | |
| Q-9-14 | 58.5 | Q-9-14_58.5 | 12/17/2014 | |
| nQ-10-14R | 31.5 | nQ-10-14R_31.5 | 12/17/2014 | X |
| nQ-10-14R | 34.5 | nQ-10-14R_34.5 | 12/17/2014 | X |
| nQ-10-14R | 37.5 | nQ-10-14R_37.5 | 12/17/2014 | X |
| nQ-10-14R | 40.5 | nQ-10-14R_40.5 | 12/17/2014 | X |
| nQ-10-14R | 43.5 | nQ-10-14R_43.5 | 12/17/2014 | X |
| nQ-10-14R | 46.5 | nQ-10-14R_46.5 | 12/17/2014 | X |
| nQ-10-14R | 49.5 | nQ-10-14R_49.5 | 12/17/2014 | X |
| nQ-10-14R | 52.5 | nQ-10-14R_52.5 | 12/17/2014 | X |
| nQ-10-14R | 55.5 | nQ-10-14R_55.5 | 12/17/2014 | X |
| nQ-10-14R | 58.5 | nQ-10-14R_58.5 | 12/17/2014 | X |
| nZZC-13-14 ⁽³⁾ | 1.5 | nZZC-13-14_1.5 | 12/17/2014 | |
| nZZC-13-14 ⁽³⁾ | 4.5 | nZZC-13-14_4.5 | 12/17/2014 | |
| nZZC-13-14 ⁽³⁾ | 7.5 | nZZC-13-14_7.5 | 12/17/2014 | |

Notes and Abbreviations on last page.

Table 2. Volatile Organic Compounds Sample Details, Park Soil Pre-Design Sampling,
Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID | Sample Midpoint Depth (ft bbls) | Sample ID | Date Sampled | VOC Fixed Base Lab Analysis ⁽²⁾ |
|-------------------------------------|---------------------------------|----------------|--------------|--|
| TCLP sampling ⁽⁴⁾ | | | | |
| B-34-14 | 4.5 | B-34-14 (4.5) | 5/12/2015 | X |
| B-34-14 | 7.5 | B-34-14 (7.5) | 5/12/2015 | X |
| B-34-14 | 13.5 | B-34-14 (13.5) | 5/12/2015 | X |
| B-34-14 | 34.5 | B-34-14 (34.5) | 5/12/2015 | X |
| B-34-14 | 43.5 | B-34-14 (43.5) | 5/12/2015 | X |
| B-34-14 | 46.5 | B-34-14 (46.5) | 5/12/2015 | X |
| B-34-14 | 49.5 | B-34-14 (49.5) | 5/12/2015 | X |
| B-34-14 | 52.5 | B-34-14 (52.5) | 5/12/2015 | X |
| B-34-14 | 55.5 | B-34-14 (55.5) | 5/12/2015 | X |
| F-6-14 | 10.5 | F-6-14 (10.5) | 5/8/2015 | X |
| F-6-14 | 16.5 | F-6-14 (16.5) | 5/8/2015 | X |
| H-7-14 | 8 | H-7-14 (8) | 5/12/2015 | X |
| H-7-14 | 16 | H-7-14 (16) | 5/12/2015 | X |
| H-7-14 | 20 | H-7-14 (20) | 5/12/2015 | X |
| H-5-15 | 46 | H-5-15 (46) | 5/12/2015 | X |

Notes and Abbreviations:

Samples were collected every 4 feet per the Pre-Design Sampling Work Plan for VOC Source Area (Work Plan) (EMAGIN 2014)

Additional samples collected per Work Plan Addendum (ARCADIS 2014) were collected every 3 feet.

- (1) Samples submitted to mobile laboratory were analyzed for the TCL VOCs using Direct Sampling Ion Trap Mass
 - (2) Samples submitted to fixed based laboratory were analyzed for the TCL VOCs using USEPA Method 8260C.
 - (3) Boring location in McKay Field access road
 - (4) Samples analyzed for TCLP VOCs (sample interval 0.5 feet)
- USEPA United States Environmental Protection Agency
TCL Target compound list
VOC Volatile organic compound
ft bbls Feet below original land surface that existed prior to the Town of Oyster Bay bringing in cover material.
TCLP Toxicity Characteristic Leaching Procedure

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | F-2-14 | F-7-14 | F-7-14 | |
|-----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
| Sample Midpoint Depth (ft): | 22 | 26 | 30 | 34 | 38 | 42 | 46 | 50 | 4 | |
| Date Sampled: | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/3/2014 | 11/3/2014 | |
| Sample ID: | F-2-14_22 | F-2-14_26 | F-2-14_30 | F-2-14_34 | F-2-14_38 | F-2-14_42 | F-2-14_46 | F-2-14_50 | F-7-14_4 | F-7-14_8 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.21 | <0.21 | |
| Trichloroethene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.21 | <0.21 | |
| Dichloroethene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.21 | <0.21 | |
| Vinyl chloride+1,2-Dichloroethane | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.21 | <0.21 | |
| Benzene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.21 | <0.21 | |
| Toluene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.21 | <0.21 | |
| Ethylbenzene+Xylenes | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.21 | <0.21 | |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| | Boring ID: Sample Midpoint Depth (ft): | F-7-14 12 | F-7-14 16 | F-7-14 20 | F-7-14 25 | F-7-14 27 | nG-3-14 4 | nG-3-14 8 | nG-3-14 12 | nG-3-14 16 | nG-3-14 20 |
|------------------------------------|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|
| | Date Sampled: | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 |
| | Sample ID: | F-7-14_12 | F-7-14_16 | F-7-14_20 | F-7-14_24 | F-7-14_27 | nG-3-14_4 | nG-3-14_8 | nG-3-14_12 | nG-3-14_16 | nG-3-14_20 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | | |
| Tetrachloroethene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 |
| Trichloroethene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 |
| Dichloroethene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 |
| Vinyl chloride+1,2-Dichloroethane | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 |
| Benzene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 |
| Toluene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 |
| Ethylbenzene+Xylenes | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nJ-6-14 | nJ-6-14 | nJ-6-14 | nJ-6-14 | nJ-6-14 | M-7-14 | M-7-14 | M-7-14 | M-7-14 | |
|-----------------------------------|-----------|-----------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|
| Sample Midpoint Depth (ft): | 4 | 8 | 12 | 16 | 20 | 19 | 22 | 25 | 32 | |
| Date Sampled: | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | |
| Sample ID: | nJ-6-14_4 | nJ-6-14_8 | nJ-6-14_12 | nJ-6-14_16 | nJ-6-14_20 | M-7-14_19 | M-7-14_22 | M-7-14_25 | M-7-14_32 | M-7-14_34 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | |
| Trichloroethene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | |
| Dichloroethene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | |
| Vinyl chloride+1,2-Dichloroethane | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | |
| Benzene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | |
| Toluene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | |
| Ethylbenzene+Xylenes | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | M-7-14 | M-7-14 | M-7-14 | M-7-14 | M-7-14 | M-7-14 | M-7-14 | O-5-14 | O-5-14 | O-5-14 |
|-----------------------------------|-----------|--------------|-----------|--------------|-------------|-------------|-------------|-----------|-----------|-----------|
| Sample Midpoint Depth (ft): | 38 | 38 | 40 | 44 | 48 | 52 | 56 | 4 | 8 | 12 |
| Date Sampled: | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 |
| Sample ID: | M-7-14_38 | M-7-14_38_V2 | M-7-14_40 | M-7-14_44 | M-7-14_48 | M-7-14_52 | M-7-14_56 | O-5-14_4 | O-5-14_8 | O-5-14_12 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.20 | <0.20 | <0.20 |
| Trichloroethene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | 0.70 | 1.11 | <0.20 | <0.20 | <0.20 |
| Dichloroethene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | 0.96 | 0.64 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride+1,2-Dichloroethane | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.20 | <0.20 | <0.20 |
| Benzene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.20 | <0.20 | <0.20 |
| Toluene | <0.21 | <0.21 | <0.21 | 57.17 | 1.70 | 0.75 | <0.21 | <0.20 | <0.20 | <0.20 |
| Ethylbenzene+Xylenes | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.20 | <0.20 | <0.20 |
| TVOCs | 0 | 0 | 0 | 57 | 1.7 | 2.4 | 1.8 | 0 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | O-5-14 | |
|-----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Sample Midpoint Depth (ft): | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 | |
| Date Sampled: | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | |
| Sample ID: | O-5-14_16 | O-5-14_20 | O-5-14_24 | O-5-14_28 | O-5-14_32 | O-5-14_36 | O-5-14_40 | O-5-14_44 | O-5-14_48 | O-5-14_52 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | |
| Trichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | |
| Dichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | |
| Toluene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nO-8-14 | nO-8-14 | nO-8-14 | nO-8-14 | nO-8-14 | nO-8-14 | nO-8-14 | nQ-10-14 | nQ-10-14 | nQ-10-14 |
|-----------------------------------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Sample Midpoint Depth (ft): | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 4 | 8 | 12 |
| Date Sampled: | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 |
| Sample ID: | nO-8-14_4 | nO-8-14_8 | nO-8-14_12 | nO-8-14_16 | nO-8-14_20 | nO-8-14_24 | nO-8-14_28 | nQ-10-14_4 | nQ-10-14_8 | nQ-10-14_12 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 |
| Trichloroethene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 |
| Dichloroethene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 |
| Vinyl chloride+1,2-Dichloroethane | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 |
| Benzene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 |
| Toluene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 |
| Ethylbenzene+Xylenes | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nQ-10-14 | nQ-10-14 | nQ-10-14 | nQ-10-14 | nQ-13-14 | nQ-13-14 | nQ-13-14 | nQ-13-14 | |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|------------|-------------|-------------|-------------|
| Sample Midpoint Depth (ft): | 16 | 20 | 24 | 28 | 4 | 8 | 12 | 16 | |
| Date Sampled: | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | |
| Sample ID: | nQ-10-14_16 | nQ-10-14_20 | nQ-10-14_24 | nQ-10-14_28 | nQ-13-14_4 | nQ-13-14_8 | nQ-13-14_12 | nQ-13-14_16 | nQ-13-14_20 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | |
| Tetrachloroethene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | |
| Trichloroethene | <0.21 | <0.21 | <0.21 | <0.21 | 1.68 | <0.21 | <0.21 | <0.21 | |
| Dichloroethene | <0.21 | <0.21 | <0.21 | <0.21 | 0.29 | <0.21 | <0.21 | <0.21 | |
| Vinyl chloride+1,2-Dichloroethane | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | |
| Benzene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | |
| Toluene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | |
| Ethylbenzene+Xylenes | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | |
| TVOCs | 0 | 0 | 0 | 0 | 2.0 | 0 | 0 | 0 | |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| | Boring ID: nQ-13-14 | nQ-13-14 | L-8-14 | |
|-----------------------------------|---------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Sample Midpoint Depth (ft): | 24 | 28 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | |
| Date Sampled: | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | |
| Sample ID: | nQ-13-14_24 | nQ-13-14_28 | L-8-14_4 | L-8-14_8 | L-8-14_12 | L-8-14_16 | L-8-14_20 | L-8-14_24 | L-8-14_28 | L-8-14_32 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | |
| Trichloroethene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | |
| Dichloroethene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | |
| Vinyl chloride+1,2-Dichloroethane | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | |
| Benzene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | |
| Toluene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | |
| Ethylbenzene+Xylenes | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| | Boring ID: Sample Midpoint Depth (ft): | L-8-14 36 | L-8-14 41 | L-8-14 44 | L-8-14 48 | L-8-14 55 | L-8-14 56 | L-12-14 4 | L-12-14 8 | L-12-14 12 | L-12-14 16 |
|-----------------------------------|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|
| | Date Sampled: | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 |
| | Sample ID: | L-8-14_36 | L-8-14_41 | L-8-14_44 | L-8-14_48 | L-8-14_55 | L-8-14_56 | L-12-14_4 | L-12-14_8 | L-12-14_12 | L-12-14_16 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | | |
| Tetrachloroethene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.24 | <0.24 | <0.24 | <0.24 |
| Trichloroethene | <0.21 | <0.21 | <0.21 | <0.21 | 1.14 | 1.35 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 |
| Dichloroethene | <0.21 | <0.21 | <0.21 | <0.21 | 3.96 | 0.33 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 |
| Vinyl chloride+1,2-Dichloroethane | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 |
| Benzene | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 |
| Toluene | <0.21 | <0.21 | 13.49 | 1.60 | <0.21 | <0.21 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 |
| Ethylbenzene+Xylenes | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 |
| TVOCs | 0 | 0 | 13 | 1.6 | 5.1 | 1.7 | 0 | 0 | 0 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| | Boring ID: L-12-14 | L-12-14 | L-12-14 | L-12-14 | L-12-14 | L-12-14 | L-12-14 | L-12-14 | L-12-14 | L-12-14 |
|-----------------------------------|--------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Sample Midpoint Depth (ft): | 20 | 24 | 28 | 32 | 36 | 40 | 42 | 44 | 45 | 48 |
| Date Sampled: | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 |
| Sample ID: | L-12-14_20 | L-12-14_24 | L-12-14_28 | L-12-14_32 | L-12-14_36 | L-12-14_40 | L-12-14_42 | L-12-14_44 | L-12-14_45 | L-12-14_48 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.96 | <0.24 |
| Trichloroethene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.96 | <0.24 |
| Dichloroethene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.96 | <0.24 |
| Vinyl chloride+1,2-Dichloroethane | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.96 | <0.24 |
| Benzene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.96 | <0.24 |
| Toluene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | 15.57 | <0.24 |
| Ethylbenzene+Xylenes | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.96 | <0.24 |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| | Boring ID: L-12-14 | L-12-14 | N-12-14 | N-12-14 | N-12-14 | N-12-14 | N-12-14 | N-12-14 | N-12-14 | N-12-14 |
|-----------------------------------|-----------------------|------------|-----------|-----------|------------|------------|------------|------------|------------|------------|
| Sample Midpoint Depth (ft): | 52 | 56 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 |
| Date Sampled: | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 |
| Sample ID: | L-12-14_52 | L-12-14_56 | N-12-14_4 | N-12-14_8 | N-12-14_12 | N-12-14_16 | N-12-14_20 | N-12-14_24 | N-12-14_28 | N-12-14_32 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 |
| Trichloroethene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 |
| Dichloroethene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 |
| Vinyl chloride+1,2-Dichloroethane | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 |
| Benzene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 |
| Toluene | 1.04 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 |
| Ethylbenzene+Xylenes | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 |
| TVOCs | 1.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| | Boring ID: N-12-14 | N-12-14 | N-12-14 | N-12-14 | N-12-14 | N-12-14 | N-12-14 | P-7-14 | P-7-14 | P-7-14 |
|-----------------------------------|--------------------|------------|------------|-------------|-------------|-------------|-------------|-----------|-----------|-----------|
| Sample Midpoint Depth (ft): | 36 | 40 | 44 | 48 | 52 | 56 | 58 | 4 | 8 | 12 |
| Date Sampled: | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 |
| Sample ID: | N-12-14_36 | N-12-14_40 | N-12-14_44 | N-12-14_48 | N-12-14_52 | N-12-14_56 | N-12-14_58 | P-7-14_4 | P-7-14_8 | P-7-14_12 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.19 | <0.19 | <0.19 |
| Trichloroethene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | 1.24 | <0.19 | <0.19 | <0.19 |
| Dichloroethene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.19 | <0.19 | <0.19 |
| Vinyl chloride+1,2-Dichloroethane | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.19 | <0.19 | <0.19 |
| Benzene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.19 | <0.19 | <0.19 |
| Toluene | <0.24 | <0.24 | <0.24 | 5.00 | 3.68 | 1.98 | <0.24 | <0.19 | <0.19 | <0.19 |
| Ethylbenzene+Xylenes | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.19 | <0.19 | <0.19 |
| TVOCs | 0 | 0 | 0 | 5.0 | 3.7 | 2.0 | 1.2 | 0 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | P-7-14 | |
|-----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Sample Midpoint Depth (ft): | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 | |
| Date Sampled: | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | |
| Sample ID: | P-7-14_16 | P-7-14_20 | P-7-14_24 | P-7-14_28 | P-7-14_32 | P-7-14_36 | P-7-14_40 | P-7-14_44 | P-7-14_48 | P-7-14_52 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | |
| Trichloroethene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | |
| Dichloroethene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | |
| Vinyl chloride+1,2-Dichloroethane | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | |
| Benzene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | |
| Toluene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | |
| Ethylbenzene+Xylenes | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | P-7-14 | P-12-14 | P-12-14 | P-12-14 | P-12-14 | P-12-14 | P-12-14 | P-12-14 | P-12-14 | |
|------------------------------------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|
| Sample Midpoint Depth (ft): | 56 | 4 | 7 | 12 | 16 | 20 | 24 | 28 | 32 | |
| Date Sampled: | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | |
| Sample ID: | P-7-14_56 | P-12-14_4 | P-12-14_7 | P-12-14_12 | P-12-14_16 | P-12-14_20 | P-12-14_24 | P-12-14_28 | P-12-14_32 | P-12-14_36 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | |
| Trichloroethene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | |
| Dichloroethene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | |
| Vinyl chloride+1,2-Dichloroethane | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | |
| Benzene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | |
| Toluene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | |
| Ethylbenzene+Xylenes | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | P-12-14 | P-12-14 | P-12-14 | P-12-14 | P-12-14 | P-12-14 | Q-8-14 | Q-8-14 | Q-8-14 | Q-8-14 |
|-----------------------------------|------------|--------------|--------------|--------------|-------------|------------|-----------|-----------|-----------|-----------|
| Sample Midpoint Depth (ft): | 40 | 44 | 48 | 51 | 53 | 55 | 4 | 8 | 16 | 20 |
| Date Sampled: | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 |
| Sample ID: | P-12-14_40 | P-12-14_44 | P-12-14_48 | P-12-14_51 | P-12-14_53 | P-12-14_55 | Q-8-14_4 | Q-8-14_8 | Q-8-14_16 | Q-8-14_20 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 |
| Trichloroethene | <0.19 | <0.19 | 0.09J | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 |
| Dichloroethene | <0.19 | 17.48 | 0.39 | 0.13J | 0.60 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 |
| Vinyl chloride+1,2-Dichloroethane | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 |
| Benzene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 |
| Toluene | <0.19 | <0.19 | <0.19 | <0.19 | 1.16 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 |
| Ethylbenzene+Xylenes | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 |
| TVOCs | 0 | 17 | 0.50 | 0 | 1.8 | 0 | 0 | 0 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | Q-8-14 | Q-8-14 | Q-8-14 | Q-8-14 | Q-8-14 | Q-8-14 | Q-8-14 | Q-8-14 | G-8-14 | G-8-14 |
|------------------------------------|-----------|-----------|-----------|-----------|-----------|-------------|-----------|-----------|-----------|--------------|
| Sample Midpoint Depth (ft): | 24 | 28 | 32 | 36 | 40 | 44 | 48 | 52 | 4 | 8 |
| Date Sampled: | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/6/2014 | 11/6/2014 |
| Sample ID: | Q-8-14_24 | Q-8-14_28 | Q-8-14_32 | Q-8-14_36 | Q-8-14_40 | Q-8-14_44 | Q-8-14_48 | Q-8-14_52 | G-8-14_4 | G-8-14_8 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.24 | <0.24 |
| Trichloroethene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | 4.87 | <0.19 | <0.19 | <0.24 | <0.24 |
| Dichloroethene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | 5.49 | <0.19 | <0.19 | <0.24 | <0.24 |
| Vinyl chloride+1,2-Dichloroethane | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.24 | <0.24 |
| Benzene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.24 | <0.24 |
| Toluene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | 1.08 | <0.19 | <0.19 | <0.24 | 35.10 |
| Ethylbenzene+Xylenes | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.24 | <0.24 |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 35 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | G-8-14 | G-8-14 | G-8-14 | G-8-14 | G-8-14 | H-7-14 | H-7-14 | H-7-14 | H-7-14 |
|-----------------------------------|-------------|-----------|-----------|-----------|-----------|-----------|---------------|---------------|--------------|
| Sample Midpoint Depth (ft): | 12 | 16 | 20 | 24 | 28 | 4 | 8 | 12 | 16 |
| Date Sampled: | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 |
| Sample ID: | G-8-14_12 | G-8-14_16 | G-8-14_20 | G-8-14_24 | G-8-14_28 | H-7-14_4 | H-7-14_8 | H-7-14_12 | H-7-14_16 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | |
| Tetrachloroethene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.21 | <4.17 | <1.67 | <0.42 |
| Trichloroethene | 0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.21 | <4.0 | <1.6 | <0.42 |
| Dichloroethene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.21 | <4.0 | <1.6 | <0.42 |
| Vinyl chloride+1,2-Dichloroethane | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.21 | <4.0 | <1.6 | <0.21 |
| Benzene | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.21 | <4.0 | <1.6 | <0.42 |
| Toluene | 6.19 | <0.24 | <0.24 | <0.24 | <0.24 | <0.21 | 760.10 | 437.03 | 21.89 |
| Ethylbenzene+Xylenes | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.21 | <4.17 | <1.67 | <0.42 |
| TVOCs | 6.4 | 0 | 0 | 0 | 0 | 0 | 760 | 440 | 22 |
| | | | | | | | | | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| | Boring ID: H-7-14 | H-7-14 | I-2-14 | |
|-----------------------------------|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------------|-----------|
| Sample Midpoint Depth (ft): | 22 | 28 | 22 | 26 | 30 | 34 | 38 | 42 | 46 | |
| Date Sampled: | 11/3/2014 | 11/3/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | |
| Sample ID: | H-7-14_22 | H-7-14_28 | I-2-14_22 | I-2-14_26 | I-2-14_30 | I-2-14_34 | I-2-14_38 | I-2-14_42 | I-2-14_46 | I-2-14_50 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.21 | <0.21 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | |
| Trichloroethene | <0.21 | <0.21 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | 0.08J 0.50 | |
| Dichloroethene | <0.21 | <0.21 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | |
| Vinyl chloride+1,2-Dichloroethane | <0.21 | <0.21 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | |
| Benzene | <0.21 | <0.21 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | |
| Toluene | <0.21 | <0.21 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | |
| Ethylbenzene+Xylenes | <0.21 | <0.21 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | |
| TVCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.10 | 0.50 | |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| | Boring ID: J-4-14 | J-4-14 22 | J-4-14 26 | J-4-14 30 | J-4-14 34 | J-4-14 38 | J-4-14 42 | J-4-14 46 | J-4-14 50 | K-10-14 4 | K-10-14 8 |
|-----------------------------------|----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Sample Midpoint Depth (ft): | 22 | 26 | 30 | 34 | 38 | 42 | 46 | 50 | | | |
| Date Sampled: | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 |
| Sample ID: | J-4-14_22 | J-4-14_26 | J-4-14_30 | J-4-14_34 | J-4-14_38 | J-4-14_42 | J-4-14_46 | J-4-14_50 | K-10-14_4 | K-10-14_8 | |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Trichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 9.04 | 2.10 | <0.20 | <0.20 |
| Dichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 0.82 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 |
| Toluene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 6.63 | <0.20 | <0.20 | <0.20 |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 2.1 | 0 | 0 | |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| | Boring ID: K-10-14 | K-10-14 | K-10-14 | K-10-14 | K-10-14 | K-10-14 | K-10-14 | K-10-14 | K-10-14 | K-10-14 |
|-----------------------------------|--------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Sample Midpoint Depth (ft): | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 |
| Date Sampled: | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 |
| Sample ID: | K-10-14_12 | K-10-14_16 | K-10-14_20 | K-10-14_24 | K-10-14_28 | K-10-14_32 | K-10-14_36 | K-10-14_40 | K-10-14_44 | K-10-14_48 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Trichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Dichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Toluene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| | Boring ID: Sample Midpoint Depth (ft): | K-10-14 52 | nL-10-14 4 | nL-10-14 8 | nL-10-14 12 | nL-10-14 16 | nL-10-14 20 | nL-10-14 24 | nL-10-14 28 | P-9-14 4 | P-9-14 8 |
|------------------------------------|---|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|-------------|-------------|
| | Date Sampled: | 11/7/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/6/2014 | 11/6/2014 |
| | Sample ID: | K-10-14_52 | nL-10-14_4 | nL-10-14_8 | nL-10-14_12 | nL-10-14_16 | nL-10-14_20 | nL-10-14_24 | nL-10-14_28 | P-9-14_4 | P-9-14_8 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.24 | <0.24 |
| Trichloroethene | <0.20 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.24 | <0.24 |
| Dichloroethene | <0.20 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.24 | <0.24 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.24 | <0.24 |
| Benzene | <0.20 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.24 | <0.24 |
| Toluene | <0.20 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.24 | <0.24 |
| Ethylbenzene+Xylenes | <0.20 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.24 | <0.24 |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | P-9-14 | P-9-14 | P-9-14 | P-9-14 | P-9-14 | P-9-14 | P-9-14 | P-9-14 | P-9-14 |
|------------------------------------|-----------|---------------|---------------|--------------|-----------|-----------|-----------|-------------|-----------|
| Sample Midpoint Depth (ft): | 12 | 14 | 16 | 20 | 24 | 28 | 32 | 36 | 38 |
| Date Sampled: | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/6/2014 | 11/7/2014 | 11/7/2014 |
| Sample ID: | P-9-14_12 | P-9-14_14 | P-9-14_16 | P-9-14_20 | P-9-14_24 | P-9-14_28 | P-9-14_32 | P-9-14_36 | P-9-14_38 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | |
| Tetrachloroethene | <0.24 | <0.98 | <1.95 | <0.24 | <0.24 | <0.24 | <0.20 | <0.20 | <0.20 |
| Trichloroethene | <0.24 | 36.69 | 91.94 | 2.31 | <0.24 | <0.24 | <0.20 | 1.57 | <0.20 |
| Dichloroethene | <0.24 | <0.98 | <1.95 | <0.24 | <0.24 | <0.24 | <0.20 | <0.20 | <0.81 |
| Vinyl chloride+1,2-Dichloroethane | <0.24 | <0.98 | <1.95 | <0.24 | <0.24 | <0.24 | <0.20 | <0.20 | <0.81 |
| Benzene | <0.24 | <0.98 | <1.95 | <0.24 | <0.24 | <0.24 | <0.20 | <0.20 | <0.81 |
| Toluene | <0.24 | 153.22 | 127.19 | 25.77 | <0.24 | <0.24 | <0.20 | 7.62 | <0.20 |
| Ethylbenzene+Xylenes | <0.24 | <0.98 | <1.95 | <0.24 | <0.24 | <0.24 | <0.20 | <0.20 | <0.81 |
| TVOCs | 0 | 190 | 220 | 28 | 0 | 0 | 0 | 9.2 | 0 |
| | | | | | | | | | 40 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | P-9-14 | P-9-14 | P-9-14 | P-9-14 | P-9-14 | H-5-14 | H-5-14 | H-5-14 | H-5-14 |
|------------------------------------|--------------|-----------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Sample Midpoint Depth (ft): | 44 | 45 | 48 | 50 | 52 | 22 | 26 | 30 | 34 |
| Date Sampled: | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 |
| Sample ID: | P-9-14_44 | P-9-14_45 | P-9-14_48 | P-9-14_50 | P-9-14_52 | H-5-14_22 | H-5-14_26 | H-5-14_30 | H-5-14_34 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | |
| Tetrachloroethene | <0.81 | <0.81 | <1.74 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Trichloroethene | <0.20 | <0.20 | <1.74 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Dichloroethene | 28.78 | <0.20 | 37.11 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <1.74 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Benzene | <0.20 | <0.20 | <1.74 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Toluene | 10.75 | <0.20 | 199.07 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <1.74 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| TVOCs | 40 | 0 | 240 | 0 | 0 | 0 | 0 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| | Boring ID: H-5-14 | H-5-14 | H-5-14 | M-9-14 | M-9-14 | M-9-14 | M-9-14 | M-9-14 | M-9-14 |
|-----------------------------------|----------------------|--------------|-------------|-------------|-------------|--------------|-----------|-----------|-----------|
| Sample Midpoint Depth (ft): | 42 | 46 | 50 | 4 | 8 | 9 | 12 | 16 | 20 |
| Date Sampled: | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 |
| Sample ID: | H-5-14_42 | H-5-14_46 | H-5-14_50 | M-9-14_4 | M-9-14_8 | M-9-14_9 | M-9-14_12 | M-9-14_16 | M-9-14_20 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 |
| Trichloroethene | <0.20 | 10.09 | 7.03 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 |
| Dichloroethene | <0.20 | <0.20 | 0.74 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 |
| Benzene | <0.20 | <0.20 | <0.20 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 |
| Toluene | <0.20 | 4.61 | <0.20 | 4.61 | 1.90 | 26.92 | <0.19 | <0.19 | <0.19 |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <0.20 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 |
| TVOCs | 0 | 15 | 7.8 | 4.6 | 1.9 | 27 | 0 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| | Boring ID: | M-9-14 | M-9-14 | M-9-14 | M-9-14 | M-9-14 | M-9-14 | M-9-14 | M-9-14 | M-9-14 |
|-----------------------------------|------------|-----------|-----------|-----------|-----------|---------------|--------------|-------------|-------------|-------------|
| Sample Midpoint Depth (ft): | 28 | 31 | 34 | 36 | 40 | 43 | 45 | 46 | 49 | 51 |
| Date Sampled: | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 |
| Sample ID: | M-9-14_28 | M-9-14_31 | M-9-14_34 | M-9-14_36 | M-9-14_40 | M-9-14_43 | M-9-14_45 | M-9-14_46 | M-9-14_49 | M-9-14_51 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <4.0 | <4.0 | <0.37 | <0.19 | <0.19 |
| Trichloroethene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <4.0 | 0.10J | 0.39 | <0.19 | <0.19 |
| Dichloroethene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <4.0 | <4.0 | 0.58 | <0.19 | <0.19 |
| Vinyl chloride+1,2-Dichloroethane | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <4.0 | <4.0 | <0.37 | <0.19 | <0.19 |
| Benzene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <4.0 | <4.0 | <0.37 | <0.19 | <0.19 |
| Toluene | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | 345.53 | 5.15 | 3.26 | 1.16 | 1.26 |
| Ethylbenzene+Xylenes | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <4.0 | <4.0 | <0.37 | <0.19 | <0.19 |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 350 | 5.2 | 4.2 | 1.2 | 1.3 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| | Boring ID: M-9-14 | M-9-14 | F-4-14 | F-4-14 | F-4-14 | F-4-14 | F-4-14 | F-4-14 | F-4-14 | F-4-14 |
|-----------------------------------|-------------------|--------------|------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|
| Sample Midpoint Depth (ft): | 54 | 57 | 1.5 | 4.5 | 7.5 | 10.5 | 13.5 | 16.5 | 19.5 | 22.5 |
| Date Sampled: | 11/5/2014 | 11/5/2014 | 12/15/2014 | 12/15/2014 | 12/15/2014 | 12/15/2014 | 12/15/2014 | 12/15/2014 | 12/15/2014 | 12/15/2014 |
| Sample ID: | M-9-14_54 | M-9-14_57 | F-4-14_1.5 | F-4-14_4.5 | F-4-14_7.5 | F-4-14_10.5 | F-4-14_13.5 | F-4-14_16.5 | F-4-14_19.5 | F-4-14_22.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.19 | <0.19 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Trichloroethene | <0.19 | 0.55 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Dichloroethene | <0.19 | 0.15J | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride+1,2-Dichloroethane | <0.19 | <0.19 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Benzene | <0.19 | <0.19 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Toluene | 1.17 | <0.19 | <0.20 | 1.12 | 1.69 | <0.20 | 13.00 | 0.26 | <0.20 | <0.20 |
| Ethylbenzene+Xylenes | <0.19 | <0.19 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| TVOCs | 1.2 | 0.6 | 0 | 1.1 | 1.7 | 0 | 13 | 0.3 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | F-4-14 | F-4-14 | F-9-14 | F-9-14 | F-9-14 | F-9-14 | F-9-14 | nK-7-14 | nK-7-14 |
|-----------------------------------|-------------|-------------|------------|------------|------------|-------------|-------------|--------------|--------------|
| Sample Midpoint Depth (ft): | 25.5 | 28.5 | 1.5 | 4.5 | 7.5 | 10.5 | 13.5 | 31.5 | 34.5 |
| Date Sampled: | 12/15/2014 | 12/15/2014 | 12/15/2014 | 12/15/2014 | 12/15/2014 | 12/15/2014 | 12/15/2014 | 12/15/2014 | 12/15/2014 |
| Sample ID: | F-4-14_25.5 | F-4-14_28.5 | F-9-14_1.5 | F-9-14_4.5 | F-9-14_7.5 | F-9-14_10.5 | F-9-14_13.5 | nK-7-14_31.5 | nK-7-14_34.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Trichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Dichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Toluene | 0.69 | <0.20 | <0.20 | <0.20 | <0.20 | 1.37 | 1.53 | <0.20 | <0.20 |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| TVOCs | 0.69 | 0 | 0 | 0 | 0 | 1.4 | 1.5 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nK-7-14 | nQ-13-14R |
|-----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Sample Midpoint Depth (ft): | 37.5 | 40.5 | 43.5 | 46.5 | 49.5 | 52.5 | 55.5 | 58.5 | 31.5 |
| Date Sampled: | 12/15/2014 | 12/15/2014 | 12/15/2014 | 12/15/2014 | 12/15/2014 | 12/15/2014 | 12/15/2014 | 12/15/2014 | 12/16/2014 |
| Sample ID: | nK-7-14_37.5 | nK-7-14_40.5 | nK-7-14_43.5 | nK-7-14_46.5 | nK-7-14_49.5 | nK-7-14_52.5 | nK-7-14_55.5 | nK-7-14_58.5 | nQ-13-14R_31.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Trichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | 0.58 | 1.10 | 0.87 | <0.20 | <0.20 |
| Dichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Toluene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| TVCs | 0 | 0 | 0 | 0 | 0.58 | 1.1 | 0.87 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nQ-13-14R |
|-----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Sample Midpoint Depth (ft): | 34.5 | 37.5 | 40.5 | 43.5 | 46.5 | 49.5 | 52.5 | 55.5 |
| Date Sampled: | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 |
| Sample ID: | nQ-13-14R_34.5 | nQ-13-14R_37.5 | nQ-13-14R_40.5 | nQ-13-14R_43.5 | nQ-13-14R_46.5 | nQ-13-14R_49.5 | nQ-13-14R_52.5 | nQ-13-14R_55.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Trichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | 1.19 | <0.20 | <0.20 | <0.20 |
| Dichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | 6.28 | <0.20 | 0.18J | <0.20 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.20 | 0.54 | <0.20 | <0.20 | <0.20 |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Toluene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| TVOCs | 0 | 0 | 0 | 0 | 8.0 | 0 | 0.18 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nQ-13-14R | nR-10-14 | nR-10-14 | nR-10-14 | nR-10-14 | nR-10-14 | nR-10-14 | nR-10-14 | nR-10-14 |
|-----------------------------------|----------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|
| Sample Midpoint Depth (ft): | 58.5 | 1.5 | 4.5 | 7.5 | 10.5 | 13.5 | 16.5 | 19.5 | 22.5 |
| Date Sampled: | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 |
| Sample ID: | nQ-13-14R_58.5 | nR-10-14_1.5 | nR-10-14_4.5 | nR-10-14_7.5 | nR-10-14_10.5 | nR-10-14_13.5 | nR-10-14_16.5 | nR-10-14_19.5 | nR-10-14_22.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Trichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Dichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Toluene | 0.85 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| TVOCs | 0.85 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nR-10-14 |
|-----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Sample Midpoint Depth (ft): | 25.5 | 28.5 | 31.5 | 34.5 | 37.5 | 40.5 | 43.5 | 46.5 | 49.5 |
| Date Sampled: | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 |
| Sample ID: | nR-10-14_25.5 | nR-10-14_28.5 | nR-10-14_31.5 | nR-10-14_34.5 | nR-10-14_37.5 | nR-10-14_40.5 | nR-10-14_43.5 | nR-10-14_46.5 | nR-10-14_49.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Trichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 2.69 | 0.64 |
| Dichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 8.51 | <0.20 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 1.29 | <0.20 |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Toluene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 2.50 | <0.20 |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0.64 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| | Boring ID: nR-10-14 | nR-10-14 | nR-10-14 | nG-2-14 | nG-2-14 | nG-2-14 | nG-2-14 | nG-2-14 | nG-2-14 |
|-----------------------------------|---------------------|---------------|---------------|-------------|-------------|-------------|--------------|--------------|--------------|
| Sample Midpoint Depth (ft): | 52.5 | 55.5 | 58.5 | 1.5 | 4.5 | 7.5 | 10.5 | 13.5 | 16.5 |
| Date Sampled: | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 |
| Sample ID: | nR-10-14_52.5 | nR-10-14_55.5 | nR-10-14_58.5 | nG-2-14_1.5 | nG-2-14_4.5 | nG-2-14_7.5 | nG-2-14_10.5 | nG-2-14_13.5 | nG-2-14_16.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Trichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Dichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Toluene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| | Boring ID: nG-2-14 | nG-2-14 |
|-----------------------------------|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Sample Midpoint Depth (ft): | 25.5 | 28.5 | 31.5 | 34.5 | 37.5 | 40.5 | 43.5 | 46.5 | 49.5 |
| Date Sampled: | 12/17/2014 | 12/17/2014 | 12/18/2014 | 12/18/2014 | 12/18/2014 | 12/18/2014 | 12/18/2014 | 12/18/2014 | 12/18/2014 |
| Sample ID: | nG-2-14_25.5 | nG-2-14_28.5 | nG-2-14_31.5 | nG-2-14_34.5 | nG-2-14_37.5 | nG-2-14_40.5 | nG-2-14_43.5 | nG-2-14_46.5 | nG-2-14_49.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Trichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 0.45 |
| Dichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Toluene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.45 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nG-2-14 | nG-2-14 | nG-2-14 | nG-2-14 | nG-6-14 | nG-6-14 | nG-6-14 | nG-6-14 |
|-----------------------------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|--------------|
| Sample Midpoint Depth (ft): | 25.5 | 52.5 | 55.5 | 58.5 | 1.5 | 4.5 | 7.5 | 10.5 |
| Date Sampled: | 12/17/2014 | 12/18/2014 | 12/18/2014 | 12/18/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 |
| Sample ID: | nG-2-14_25.5 | nG-2-14_52.5 | nG-2-14_55.5 | nG-2-14_58.5 | nG-6-14_1.5 | nG-6-14_4.5 | nG-6-14_7.5 | nG-6-14_10.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <4.0 | <8.0 |
| Trichloroethene | <0.20 | 3.82 | <0.20 | <0.20 | <0.20 | <0.20 | <4.0 | <8.0 |
| Dichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <4.0 | <8.0 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <4.0 | <8.0 |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <4.0 | <8.0 |
| Toluene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 254.74 | 515.38 |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <4.0 | 71.07 |
| TVOCs | 0 | 3.8 | 0 | 0 | 0 | 0 | 250 | 520 |
| | | | | | | | 330 | |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nG-6-14 | nG-6-14 | nG-6-14 | nG-6-14 | nG-6-14 | F-6-14 | F-6-14 | F-6-14 | F-6-14 | F-6-14 |
|-----------------------------------|--------------|--------------|--------------|--------------|--------------|------------|------------|------------|-------------|-------------|
| Sample Midpoint Depth (ft): | 16.5 | 19.5 | 22.5 | 25.5 | 28.5 | 1.5 | 4.5 | 7.5 | 10.5 | 13.5 |
| Date Sampled: | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 |
| Sample ID: | nG-6-14_16.5 | nG-6-14_19.5 | nG-6-14_22.5 | nG-6-14_25.5 | nG-6-14_28.5 | F-6-14_1.5 | F-6-14_4.5 | F-6-14_7.5 | F-6-14_10.5 | F-6-14_13.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <2.0 |
| Trichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <2.0 |
| Dichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <2.0 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <2.0 |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <2.0 |
| Toluene | 3.84 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 3.51 | 11.12 | 38.61 |
| Ethylbenzene+Xylenes | 4.01 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 6.75 | 9.12 | 21.13 |
| TVOCs | 7.9 | 0 | 0 | 0 | 0 | 0 | 10 | 20 | 60 | 55 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| | Boring ID: Sample Midpoint Depth (ft): | F-6-14 16.5 | F-6-14 19.5 | F-6-14 22.5 | F-6-14 25.5 | F-6-14 28.5 | nL-10-14R 31.5 | nL-10-14R 34.5 | nL-10-14R 37.5 | nL-10-14R 40.5 |
|-----------------------------------|---|----------------|----------------|----------------|----------------|----------------|-------------------|-------------------|-------------------|-------------------|
| | Date Sampled: | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 |
| | Sample ID: | F-6-14_16.5 | F-6-14_19.5 | F-6-14_22.5 | F-6-14_25.5 | F-6-14_28.5 | nL-10-14R_31.5 | nL-10-14R_34.5 | nL-10-14R_37.5 | nL-10-14R_40.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <2.0 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Trichloroethene | <2.0 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Dichloroethene | <2.0 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride+1,2-Dichloroethane | <2.0 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Benzene | <2.0 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Toluene | <2.0 | 2.35 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Ethylbenzene+Xylenes | <2.0 | 4.43 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| TVOCs | 0 | 6.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| | Boring ID: nL-10-14R | nL-10-14R | nL-10-14R | nL-10-14R | nL-10-14R | nL-10-14R | nM-10-14 | nM-10-14 | nM-10-14 |
|-----------------------------------|----------------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|--------------|
| Sample Midpoint Depth (ft): | 43.5 | 46.5 | 49.5 | 52.5 | 55.5 | 58.5 | 1.5 | 4.5 | 7.5 |
| Date Sampled: | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 |
| Sample ID: | nL-10-14R_43.5 | nL-10-14R_46.5 | nL-10-14R_49.5 | nL-10-14R_52.5 | nL-10-14R_55.5 | nL-10-14R_58.5 | nM-10-14_1.5 | nM-10-14_4.5 | nM-10-14_7.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | |
| Tetrachloroethene | <8.0 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Trichloroethene | <8.0 | <0.20 | <0.20 | <0.20 | <0.20 | 0.11J | <0.20 | <0.20 | <0.20 |
| Dichloroethene | <8.0 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride+1,2-Dichloroethane | <8.0 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Benzene | <8.0 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Toluene | 446.67 | 0.39 | 0.33 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Ethylbenzene+Xylenes | 493.33 | 1.04 | 1.39 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| TVOCs | 940 | 1.4 | 1.7 | 0 | 0 | 0.11 | 0 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nM-10-14 |
|-----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Sample Midpoint Depth (ft): | 10.5 | 13.5 | 16.5 | 19.5 | 22.5 | 25.5 | 28.5 | 31.5 |
| Date Sampled: | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 |
| Sample ID: | nM-10-14_10.5 | nM-10-14_13.5 | nM-10-14_16.5 | nM-10-14_19.5 | nM-10-14_22.5 | nM-10-14_25.5 | nM-10-14_28.5 | nM-10-14_31.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Trichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Dichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Toluene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| TVCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| | Boring ID: nM-10-14 | nM-10-14 |
|-----------------------------------|------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Sample Midpoint Depth (ft): | 34.5 | 37.5 | 40.5 | 43.5 | 46.5 | 49.5 | 52.5 | 55.5 |
| Date Sampled: | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 | 12/16/2014 |
| Sample ID: | nM-10-14_34.5 | nM-10-14_37.5 | nM-10-14_40.5 | nM-10-14_43.5 | nM-10-14_46.5 | nM-10-14_49.5 | nM-10-14_52.5 | nM-10-14_55.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <2.0 | <8.0 | <0.20 | <0.20 | <0.20 | <0.20 |
| Trichloroethene | <0.20 | <0.20 | <2.0 | <8.0 | <0.20 | <0.20 | <0.20 | <0.20 |
| Dichloroethene | <0.20 | <0.20 | <2.0 | 9.29 | <0.20 | <0.20 | <0.20 | 0.65 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <2.0 | 16.16 | <0.20 | <0.20 | <0.20 | 1.00 |
| Benzene | <0.20 | <0.20 | <2.0 | <8.0 | <0.20 | <0.20 | <0.20 | <0.20 |
| Toluene | <0.20 | <0.20 | 22.74 | 125.25 | 5.11 | 0.94 | 0.47 | 3.52 |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | 61.69 | 104.65 | 2.24 | 1.55 | 1.49 | 0.43 |
| TVOCs | 0 | 0 | 84 | 260 | 7.4 | 2.5 | 2.0 | 5.6 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nM-10-14 | nM-11-14 | nM-11-14 | nM-11-14 | nM-11-14 | nM-11-14 | nM-11-14 | nM-11-14 | nM-11-14 |
|-----------------------------------|---------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|
| Sample Midpoint Depth (ft): | 58.5 | 1.5 | 4.5 | 7.5 | 10.5 | 13.5 | 16.5 | 19.5 | 22.5 |
| Date Sampled: | 12/16/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 |
| Sample ID: | nM-10-14_58.5 | nM-11-14_1.5 | nM-11-14_4.5 | nM-11-14_7.5 | nM-11-14_10.5 | nM-11-14_13.5 | nM-11-14_16.5 | nM-11-14_19.5 | nM-11-14_22.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Trichloroethene | 0.66 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Dichloroethene | 0.25 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Toluene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| TVOCs | 0.91 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nM-11-14 |
|-----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Sample Midpoint Depth (ft): | 25.5 | 28.5 | 31.5 | 34.5 | 37.5 | 40.5 | 43.5 | 46.5 | 49.5 |
| Date Sampled: | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 |
| Sample ID: | nM-11-14_25.5 | nM-11-14_28.5 | nM-11-14_31.5 | nM-11-14_34.5 | nM-11-14_37.5 | nM-11-14_40.5 | nM-11-14_43.5 | nM-11-14_46.5 | nM-11-14_49.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <8.0 | <8.0 | <8.0 | <0.80 |
| Trichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <8.0 | <8.0 | <8.0 | <0.80 |
| Dichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <8.0 | 29.02 | <8.0 | <0.80 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <8.0 | <8.0 | <8.0 | <0.80 |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <8.0 | <8.0 | <8.0 | <0.80 |
| Toluene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 191.93 | 302.75 | 51.13 | 6.14 |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 182.39 | 273.33 | 55.26 | 1.21 |
| TVCs | 0 | 0 | 0 | 0 | 0 | 370 | 610 | 110 | 7.4 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nM-11-14 | nM-11-14 | nM-11-14 | nN-9-14 | nN-9-14 | nN-9-14 | nN-9-14 | nN-9-14 |
|------------------------------------|---------------|---------------|---------------|-------------|-------------|--------------|---------------|----------------|
| Sample Midpoint Depth (ft): | 52.5 | 55.5 | 58.5 | 1.5 | 4.5 | 7.5 | 10.5 | 13.5 |
| Date Sampled: | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 |
| Sample ID: | nM-11-14_52.5 | nM-11-14_55.5 | nM-11-14_58.5 | nN-9-14_1.5 | nN-9-14_4.5 | nN-9-14_7.5 | nN-9-14_10.5 | nN-9-14_13.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.80 | <8.0 | <40 |
| Trichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.80 | <8.0 | 2380.00 |
| Dichloroethene | <0.20 | 3.26 | <0.20 | <0.20 | <0.20 | 28.52 | 636.73 | 612.00 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | 1.11 | <0.20 | <0.20 | <0.20 | <0.80 | <8.0 | <40 |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.80 | <8.0 | <40 |
| Toluene | 4.49 | 4.99 | <0.20 | <0.20 | 1.58 | 4.36 | 200.82 | 770.00 |
| Ethylbenzene+Xylenes | 1.66 | 0.60 | <0.20 | <0.20 | 3.61 | 10.62 | 137.55 | 760.00 |
| TVOCs | 6.2 | 10 | 0 | 0 | 5.2 | 44 | 980 | 4500 |
| | | | | | | | | 15 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nN-9-14 | nN-9-14 | nN-9-14 | nN-9-14 | nN-9-14 | nN-9-14 | nN-9-14 | nN-9-14 | nN-9-14 |
|-----------------------------------|--------------|--------------|--------------|--------------|--------------|----------------|--------------|----------------|--------------|
| Sample Midpoint Depth (ft): | 19.5 | 22.5 | 25.5 | 28.5 | 31.5 | 40.5 | 43.5 | 46.5 | 49.5 |
| Date Sampled: | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 |
| Sample ID: | nN-9-14_19.5 | nN-9-14_22.5 | nN-9-14_25.5 | nN-9-14_28.5 | nN-9-14_31.5 | nN-9-14_40.5 | nN-9-14_43.5 | nN-9-14_46.5 | nN-9-14_49.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <4.0 | <1.6 | <40 | <4.0 |
| Trichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 1110.92 | 59.08 | <40 | <4.0 |
| Dichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <4.0 | 13.87 | <40 | <4.0 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <4.0 | <1.6 | <40 | <4.0 |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <4.0 | <1.6 | <40 | <4.0 |
| Toluene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 272.27 | 2.35 | 1540.32 | 65.19 |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <4.0 | <1.6 | <40 | <4.0 |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 1400 | 75 | 1500 | 65 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nN-9-14 | nN-9-14 | nN-9-14 | O-8-14 | O-8-14 | O-8-14 | O-8-14 | O-8-14 | O-8-14 | |
|-----------------------------------|--------------|--------------|--------------|------------|------------|------------|-------------|-------------|-------------|-------------|
| Sample Midpoint Depth (ft): | 52.5 | 55.5 | 58.5 | 1.5 | 4.5 | 7.5 | 10.5 | 13.5 | 16.5 | |
| Date Sampled: | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | |
| Sample ID: | nN-9-14_52.5 | nN-9-14_55.5 | nN-9-14_58.5 | O-8-14_1.5 | O-8-14_4.5 | O-8-14_7.5 | O-8-14_10.5 | O-8-14_13.5 | O-8-14_16.5 | O-8-14_19.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.40 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | |
| Trichloroethene | <0.40 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | |
| Dichloroethene | <0.40 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | |
| Vinyl chloride+1,2-Dichloroethane | <0.40 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | |
| Benzene | <0.40 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | |
| Toluene | 7.49 | <0.20 | <0.20 | <0.20 | 1.22 | <0.20 | <0.20 | <0.20 | <0.20 | |
| Ethylbenzene+Xylenes | <0.40 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | |
| TVOCs | 7.5 | 0 | 0 | 0 | 1.2 | 0 | 0 | 0 | 0 | |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | O-8-14 | |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Sample Midpoint Depth (ft): | 22.5 | 25.5 | 28.5 | 31.5 | 34.5 | 37.5 | 40.5 | 43.5 | 46.5 | |
| Date Sampled: | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | |
| Sample ID: | O-8-14_22.5 | O-8-14_25.5 | O-8-14_28.5 | O-8-14_31.5 | O-8-14_34.5 | O-8-14_37.5 | O-8-14_40.5 | O-8-14_43.5 | O-8-14_46.5 | O-8-14_49.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <8.0 | |
| Trichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <8.0 | |
| Dichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <8.0 | |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <8.0 | |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <8.0 | |
| Toluene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 6.64 | 618.18 | |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 16.78 | 440.00 | |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 1100 | |
| | | | | | | | | | 270 | |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | O-8-14 | O-8-14 | O-8-14 | Q-9-14 | Q-9-14 | Q-9-14 | Q-9-14 | Q-9-14 | Q-9-14 | |
|-----------------------------------|-------------|-------------|-------------|------------|-------------|------------|-------------|-------------|-------------|-------------|
| Sample Midpoint Depth (ft): | 52.5 | 55.5 | 58.5 | 1.5 | 4.5 | 7.5 | 10.5 | 13.5 | 16.5 | |
| Date Sampled: | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | |
| Sample ID: | O-8-14_52.5 | O-8-14_55.5 | O-8-14_58.5 | Q-9-14_1.5 | Q-9-14_4.5 | Q-9-14_7.5 | Q-9-14_10.5 | Q-9-14_13.5 | Q-9-14_16.5 | Q-9-14_19.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | |
| Trichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | 0.92 | <0.20 | <0.20 | <0.20 | <0.20 | |
| Dichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | |
| Toluene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | |
| TVOCs | 0 | 0 | 0 | 0 | 0.92 | 0 | 0 | 0 | 0 | |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | Q-9-14 | Q-9-14 | Q-9-14 |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| Sample Midpoint Depth (ft): | 22.5 | 25.5 | 28.5 | 31.5 | 34.5 | 37.5 | 40.5 | 43.5 | 46.5 | 49.5 |
| Date Sampled: | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 |
| Sample ID: | Q-9-14_22.5 | Q-9-14_25.5 | Q-9-14_28.5 | Q-9-14_31.5 | Q-9-14_34.5 | Q-9-14_37.5 | Q-9-14_40.5 | Q-9-14_43.5 | Q-9-14_46.5 | Q-9-14_49.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.80 | <0.20 | <0.20 |
| Trichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 24.58 | <0.20 | <0.20 |
| Dichloroethene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 2.85 | 0.86 | 0.42 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.80 | <0.20 | <0.20 |
| Benzene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.80 | <0.20 | <0.20 |
| Toluene | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 0.41 | 1.21 | <0.20 |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 1.17 | <0.80 | <0.20 |
| TVOCs | 0 | 0 | 0 | 0 | 0 | 0 | 1.6 | 29 | 0.86 | 0.42 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | Q-9-14 | Q-9-14 | Q-9-14 | nQ-10-14R | nQ-10-14R | nQ-10-14R | nQ-10-14R | nQ-10-14R |
|------------------------------------|--------------|-------------|-------------|----------------|----------------|----------------|----------------|----------------|
| Sample Midpoint Depth (ft): | 52.5 | 55.5 | 58.5 | 31.5 | 34.5 | 37.5 | 40.5 | 43.5 |
| Date Sampled: | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 |
| Sample ID: | Q-9-14_52.5 | Q-9-14_55.5 | Q-9-14_58.5 | nQ-10-14R_31.5 | nQ-10-14R_34.5 | nQ-10-14R_37.5 | nQ-10-14R_40.5 | nQ-10-14R_43.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | |
| Tetrachloroethene | <8.0 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.80 |
| Trichloroethene | <8.0 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 36.26 |
| Dichloroethene | <8.0 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 117.36 |
| Vinyl chloride+1,2-Dichloroethane | <8.0 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.80 |
| Benzene | <8.0 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.80 |
| Toluene | 40.86 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 0.86 | <0.80 |
| Ethylbenzene+Xylenes | 63.88 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 3.23 | <0.80 |
| TVOCs | 100 | 0 | 0 | 0 | 0 | 0 | 4.1 | 150 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| | Boring ID: nQ-10-14R | nQ-10-14R | nQ-10-14R | nQ-10-14R | nQ-10-14R | nZZC-13-14 | nZZC-13-14 | nZZC-13-14 |
|-----------------------------------|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Sample Midpoint Depth (ft): | 46.5 | 49.5 | 52.5 | 55.5 | 58.5 | 1.5 | 4.5 | 7.5 |
| Date Sampled: | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 |
| Sample ID: | nQ-10-14R_46.5 | nQ-10-14R_49.5 | nQ-10-14R_52.5 | nQ-10-14R_55.5 | nQ-10-14R_58.5 | nZZC-13-14_1.5 | nZZC-13-14_4.5 | nZZC-13-14_7.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | | | |
| Tetrachloroethene | <0.20 | <0.20 | <4.0 | <0.80 | <0.20 | <0.20 | <0.20 | <0.20 |
| Trichloroethene | <0.20 | <0.20 | 4.71 | <0.80 | <0.20 | 1.42 | <0.20 | <0.20 |
| Dichloroethene | <0.20 | 2.53 | <4.0 | <0.80 | <0.20 | <0.20 | <0.20 | 6.77 |
| Vinyl chloride+1,2-Dichloroethane | <0.20 | <0.20 | <4.0 | <0.80 | <0.20 | <0.20 | <0.20 | <0.20 |
| Benzene | <0.20 | <0.20 | <4.0 | <0.80 | <0.20 | <0.20 | <0.20 | <0.20 |
| Toluene | <0.20 | <0.20 | 474.51 | <0.80 | <0.20 | <0.20 | <0.20 | 3.33 |
| Ethylbenzene+Xylenes | <0.20 | <0.20 | <4.0 | <0.80 | <0.20 | <0.20 | <0.20 | 7.50 |
| TVOCs | 0 | 2.5 | 480 | 0 | 0 | 1.4 | 0 | 18 |

Notes and Abbreviations on last page.

Table 3. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Field Analytical Method, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

Notes and Abbreviations:

1. Samples submitted to mobile laboratory were analyzed for the TCL VOCs using Direct Sampling Ion Trap Mass Spectrometer (DSITMS) using USEPA Method 8265. A total of 15 percent of mobile lab samples were also analyzed by a fixed base laboratory for confirmation.
2. Samples analyzed on a dry weight basis.
3. Samples were collected every 4 feet per the Pre-Design Sampling Work Plan for VOC Source Area (Work Plan) (EMAGIN 2014)
4. Additional samples collected per Work Plan Addendum (ARCADIS 2014) were collected every 3 feet.

Bold value indicates a detection

| | |
|-----------|---|
| 15 | Indicates TVOC concentration greater than 10 mg/kg |
| TCL | Target compound list |
| VOC | Volatile organic compound |
| TVOCs | Total volatile organic compounds |
| ft | Feet below original land surface that existed prior to the Town of Oyster Bay bringing in cover material. |
| mg/kg | Milligrams per kilogram |
| J | Value is estimated |

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | F-2-14 | nJ-6-14 | M-7-14 | M-7-14 | M-7-14 | O-5-14 |
|---------------------------------------|-----------|--------------|---------------|----------------|-------------|-------------|
| Sample Midpoint Depth (ft): | 34 | 12 | 22 | 52 | 56 | 52 |
| Date Sampled: | 11/6/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/7/2014 |
| Sampled ID: | F-2-14_34 | nJ-6-14_12 | M-7-14_22 | M-7-14_52 | M-7-14_56 | O-5-14_52 |
| CONSTITUENT (unit in mg/kg) | | | | | | |
| 1,1,1-Trichloroethane | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| 1,1,2,2-Tetrachloroethane | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 0.56 | < 0.67 | < 0.61 | < 0.51 | < 0.49 | < 0.67 |
| 1,1,2-Trichloroethane | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| 1,1-Dichloroethene | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| 1,2,4-Trichlorobenzene | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| 1,2-Dibromo-3-chloropropane | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| 1,2-Dibromoethane | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| 1,2-Dichlorobenzene | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| 1,2-Dichloroethane | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| 1,2-Dichloropropane | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| 1,3-Dichlorobenzene | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| 1,4-Dichlorobenzene | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| 2-Butanone (MEK) | < 0.56 | < 0.67 | < 0.61 | < 0.51 | < 0.49 | 0.85 |
| 4-Methyl-2-Pentanone | < 0.56 | < 0.67 | < 0.61 | < 0.51 | < 0.49 | < 0.67 |
| Acetone | < 1.1 | < 1.3 | < 1.2 | < 1 | < 0.98 | 1 J |
| Benzene | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| Bromodichlormethane | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| Bromoform | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| Bromomethane | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| Carbon Disulfide | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| Carbon Tetrachloride | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| CFC-11 | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| CFC-12 | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| Chlorobenzene | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| Chlorodibromomethane | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| Chloroethane | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| Chloroform | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| Chloromethane | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| cis-1,2-Dichloroethene | < 0.28 | < 0.33 | < 0.3 | 1.8 | 0.96 | < 0.33 |
| cis-1,3-Dichloropropene | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| Cyclohexane | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| Dichloromethane | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| Ethylbenzene | < 0.28 | < 0.33 | < 0.3 | 0.097 J | < 0.25 | < 0.33 |
| Isopropylbenzene | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| Methyl Acetate | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 0.56 | < 0.67 | < 0.61 | < 0.51 | < 0.49 | < 0.67 |
| Methylcyclohexane | < 0.28 | < 0.33 | 0.22 J | < 0.25 | < 0.25 | < 0.33 |
| Methyl-tert-butylether | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| Styrene (Monomer) | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| Tetrachloroethene | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| Toluene | < 0.28 | < 0.33 | 0.12 J | 0.27 | < 0.25 | < 0.33 |
| Total Xylenes | < 0.28 | < 0.33 | < 0.3 | 0.26 | < 0.25 | < 0.33 |
| trans-1,2-Dichloroethene | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| trans-1,3-Dichloropropene | < 0.28 | < 0.33 | < 0.3 | < 0.25 | < 0.25 | < 0.33 |
| Trichloroethene | < 0.28 | 0.2 J | < 0.3 | 0.88 | 1.1 | < 0.33 |
| Vinyl chloride | < 0.28 | < 0.33 | < 0.3 | 0.19 J | < 0.25 | < 0.33 |
| TVOCS | 0 | 0.20 | 0.34 | 3.5 | 2.1 | 1.9 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nQ-13-14 | L-8-14 | L-8-14 | L-8-14 | L-8-14 | L-8-14 |
|---------------------------------------|----------------|----------------|---------------|----------------|----------------|------------|
| Sample Midpoint Depth (ft): | 4 | 8 | 44 | 48 | 55 | 56 |
| Date Sampled: | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 | 11/3/2014 |
| Sampled ID: | nQ-13-14_4 | L-8-14_8 | L-8-14_44 | L-8-14_48 | L-8-14_55 | L-8-14_56 |
| CONSTITUENT (unit in mg/kg) | | | | | | |
| 1,1,1-Trichloroethane | 0.16 J | 0.071 J | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| 1,1,2,2-Tetrachloroethane | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 0.6 | < 0.52 | < 0.45 | < 0.45 | < 0.45 | < 0.5 |
| 1,1,2-Trichloroethane | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| 1,1-Dichloroethene | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| 1,2,4-Trichlorobenzene | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| 1,2-Dibromo-3-chloropropane | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| 1,2-Dibromoethane | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| 1,2-Dichlorobenzene | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| 1,2-Dichloroethane | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| 1,2-Dichloropropane | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| 1,3-Dichlorobenzene | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| 1,4-Dichlorobenzene | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| 2-Butanone (MEK) | < 0.6 | < 0.52 | < 0.45 | < 0.45 | < 0.45 | < 0.5 |
| 4-Methyl-2-Pentanone | < 0.6 | 0.52 | < 0.45 | < 0.45 | < 0.45 | < 0.5 |
| Acetone | < 1.2 | < 1 | < 0.89 | < 0.9 | < 0.89 | < 1 |
| Benzene | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| Bromodichloromethane | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| Bromoform | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| Bromomethane | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| Carbon Disulfide | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| Carbon Tetrachloride | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| CFC-11 | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| CFC-12 | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| Chlorobenzene | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| Chlorodibromomethane | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| Chloroethane | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| Chloroform | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| Chloromethane | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| cis-1,2-Dichloroethene | 0.65 | 0.093 J | < 0.22 | 0.085 J | 6.5 | 0.5 |
| cis-1,3-Dichloropropene | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| Cyclohexane | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| Dichloromethane | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| Ethylbenzene | < 0.3 | < 0.26 | 0.18 J | 0.13 J | 0.059 J | < 0.25 |
| Isopropylbenzene | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| Methyl Acetate | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 0.6 | < 0.52 | < 0.45 | < 0.45 | < 0.45 | < 0.5 |
| Methylcyclohexane | < 0.3 | < 0.26 | 0.14 J | < 0.23 | < 0.22 | < 0.25 |
| Methyl-tert-butylether | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| Styrene (Monomer) | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| Tetrachloroethylene | < 0.3 | 0.057 J | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| Toluene | < 0.3 | < 0.26 | 1.3 | 0.96 | 0.068 J | < 0.25 |
| Total Xylenes | < 0.3 | < 0.26 | 0.86 | 0.56 | 0.28 | < 0.25 |
| trans-1,2-Dichloroethene | 0.097 J | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| trans-1,3-Dichloropropene | < 0.3 | < 0.26 | < 0.22 | < 0.23 | < 0.22 | < 0.25 |
| Trichloroethene | 2.6 | 1.7 | < 0.22 | 0.097 J | 1.3 | 1.5 |
| Vinyl chloride | < 0.3 | < 0.26 | < 0.22 | < 0.23 | 0.098 J | < 0.25 |
| TVOCs | 3.7 | 1.9 | 2.5 | 1.8 | 8.3 | 2.0 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | L-12-14 | N-12-14 | P-7-14 | P-12-14 | P-12-14 | P-12-14 |
|---------------------------------------|-------------|----------------|-----------|------------|---------------|----------------|
| Sample Midpoint Depth (ft): | 44 | 48 | 56 | 36 | 44 | 53 |
| Date Sampled: | 11/6/2014 | 11/6/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 |
| Sampled ID: | L-12-14_44 | N-12-14_48 | P-7-14_56 | P-12-14_36 | P-12-14_44 | P-12-14_53 |
| CONSTITUENT (unit in mg/kg) | | | | | | |
| 1,1,1-Trichloroethane | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| 1,1,2,2-Tetrachloroethane | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 0.52 | < 0.67 | < 0.85 | < 0.52 | < 0.49 | < 0.46 |
| 1,1,2-Trichloroethane | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| 1,1-Dichloroethene | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| 1,2,4-Trichlorobenzene | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| 1,2-Dibromo-3-chloropropane | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| 1,2-Dibromoethane | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| 1,2-Dichlorobenzene | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| 1,2-Dichloroethane | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| 1,2-Dichloropropane | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| 1,3-Dichlorobenzene | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| 1,4-Dichlorobenzene | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| 2-Butanone (MEK) | < 0.52 | 0.88 | < 0.85 | < 0.52 | < 0.49 | < 0.46 |
| 4-Methyl-2-Pentanone | < 0.52 | < 0.67 | < 0.85 | < 0.52 | < 0.49 | < 0.46 |
| Acetone | < 1 | 0.93 J | < 1.7 | < 1 | < 0.97 | < 0.93 |
| Benzene | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Bromodichloromethane | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Bromoform | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Bromomethane | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Carbon Disulfide | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Carbon Tetrachloride | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| CFC-11 | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| CFC-12 | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Chlorobenzene | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Chlorodibromomethane | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Chloroethane | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Chloroform | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Chloromethane | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| cis-1,2-Dichloroethene | < 0.26 | 3.1 | < 0.42 | < 0.26 | 23 | 1.4 |
| cis-1,3-Dichloropropene | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Cyclohexane | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Dichlormethane | < 0.26 | < 0.33 | < 0.42 | < 0.26 | 0.13 J | < 0.23 |
| Ethylbenzene | 7.4 | 0.086 J | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Isopropylbenzene | 0.49 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Methyl Acetate | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 0.52 | < 0.67 | < 0.85 | < 0.52 | < 0.49 | < 0.46 |
| Methylcyclohexane | 3.7 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Methyl-tert-butylether | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Styrene (Monomer) | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Tetrachloroethene | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Toluene | 41 | 5.3 | < 0.42 | < 0.26 | < 0.24 | 1.3 |
| Total Xylenes | 38 | 0.34 | < 0.42 | < 0.26 | < 0.24 | 0.091 J |
| trans-1,2-Dichloroethene | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| trans-1,3-Dichloropropene | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Trichloroethene | < 0.26 | < 0.33 | < 0.42 | < 0.26 | < 0.24 | < 0.23 |
| Vinyl chloride | < 0.26 | 0.1 J | < 0.42 | < 0.26 | 0.23 J | < 0.23 |
| TVOCS | | 91 | 11 | 0 | 24 | 2.8 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | Q-8-14 | Q-8-14 | G-8-14 | H-7-14 | I-2-14 | I-2-14 |
|---------------------------------------|-----------|------------|-----------|---------------|---------------|-------------|
| Sample Midpoint Depth (ft): | 24 | 44 | 28 | 12 | 46 | 50 |
| Date Sampled: | 11/5/2014 | 11/5/2014 | 11/6/2014 | 11/3/2014 | 11/6/2014 | 11/6/2014 |
| Sampled ID: | Q-8-14_24 | Q-8-14_44 | G-8-14_28 | H-7-14_12 | I-2-14_46 | I-2-14_50 |
| CONSTITUENT (unit in mg/kg) | | | | | | |
| 1,1,1-Trichloroethane | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| 1,1,2,2-Tetrachloroethane | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 0.52 | < 0.53 | < 0.65 | < 2.4 | < 0.41 | < 0.43 |
| 1,1,2-Trichloroethane | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| 1,1-Dichloroethene | < 0.26 | < 0.27 | < 0.32 | 0.55 J | < 0.2 | < 0.22 |
| 1,2,4-Trichlorobenzene | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| 1,2-Dibromo-3-chloropropane | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| 1,2-Dibromoethane | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| 1,2-Dichlorobenzene | < 0.26 | < 0.27 | < 0.32 | 1.4 | < 0.2 | < 0.22 |
| 1,2-Dichloroethane | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| 1,2-Dichloropropane | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| 1,3-Dichlorobenzene | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| 1,4-Dichlorobenzene | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| 2-Butanone (MEK) | < 0.52 | < 0.53 | < 0.65 | < 2.4 | < 0.41 | < 0.43 |
| 4-Methyl-2-Pentanone | < 0.52 | < 0.53 | < 0.65 | < 2.4 | < 0.41 | < 0.43 |
| Acetone | < 1 | < 1.1 | < 1.3 | < 4.9 | < 0.81 | < 0.86 |
| Benzene | < 0.26 | < 0.27 | < 0.32 | 0.31 J | < 0.2 | < 0.22 |
| Bromodichloromethane | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| Bromoform | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| Bromomethane | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| Carbon Disulfide | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| Carbon Tetrachloride | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| CFC-11 | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| CFC-12 | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| Chlorobenzene | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| Chlorodibromomethane | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| Chloroethane | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| Chloroform | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| Chloromethane | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| cis-1,2-Dichloroethene | < 0.26 | 9.5 | < 0.32 | 180 | < 0.2 | < 0.22 |
| cis-1,3-Dichloropropene | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| Cyclohexane | < 0.26 | < 0.27 | < 0.32 | 1.9 | < 0.2 | < 0.22 |
| Dichloromethane | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| Ethylbenzene | < 0.26 | < 0.27 | < 0.32 | 13 | < 0.2 | < 0.22 |
| Isopropylbenzene | < 0.26 | < 0.27 | < 0.32 | 2 | < 0.2 | < 0.22 |
| Methyl Acetate | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 0.52 | < 0.53 | < 0.65 | < 2.4 | < 0.41 | < 0.43 |
| Methylcyclohexane | < 0.26 | < 0.27 | < 0.32 | 75 | < 0.2 | < 0.22 |
| Methyl-tert-butylether | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| Styrene (Monomer) | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| Tetrachloroethene | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| Toluene | < 0.26 | 1.2 | < 0.32 | 540 | < 0.2 | < 0.22 |
| Total Xylenes | < 0.26 | < 0.27 | < 0.32 | 67 | < 0.2 | < 0.22 |
| trans-1,2-Dichloroethene | < 0.26 | < 0.27 | < 0.32 | 0.28 J | < 0.2 | < 0.22 |
| trans-1,3-Dichloropropene | < 0.26 | < 0.27 | < 0.32 | < 1.2 | < 0.2 | < 0.22 |
| Trichloroethene | < 0.26 | 5.6 | < 0.32 | < 1.2 | 0.16 J | 0.54 |
| Vinyl chloride | < 0.26 | < 0.27 | < 0.32 | 16 | < 0.2 | < 0.22 |
| TVOCs | 0 | 16 | 0 | 880 | 0.16 | 0.54 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | J-4-14 | J-4-14 | K-10-14 | nL-10-14 | P-9-14 | P-9-14 |
|---------------------------------------|---------------|---------------|---------------|-------------|---------------|---------------|
| Sample Midpoint Depth (ft): | 46 | 50 | 52 | 12 | 16 | 20 |
| Date Sampled: | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/3/2014 | 11/6/2014 | 11/6/2014 |
| Sampled ID: | J-4-14_46 | J-4-14_50 | K-10-14_52 | nL-10-14_12 | P-9-14_16 | P-9-14_20 |
| CONSTITUENT (unit in mg/kg) | | | | | | |
| 1,1,1-Trichloroethane | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| 1,1,2,2-Tetrachloroethane | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 0.56 | < 0.55 | < 0.48 | < 0.23 | < 0.95 | < 0.59 |
| 1,1,2-Trichloroethane | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| 1,1-Dichloroethene | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| 1,2,4-Trichlorobenzene | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| 1,2-Dibromo-3-chloropropane | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| 1,2-Dibromoethane | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| 1,2-Dichlorobenzene | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| 1,2-Dichloroethane | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| 1,2-Dichloropropane | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| 1,3-Dichlorobenzene | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| 1,4-Dichlorobenzene | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| 2-Butanone (MEK) | 0.69 | 0.72 | 0.64 | < 0.23 | < 0.95 | < 0.59 |
| 4-Methyl-2-Pentanone | < 0.56 | < 0.55 | < 0.48 | < 0.23 | < 0.95 | < 0.59 |
| Acetone | 0.73 J | 0.76 J | 0.68 J | < 0.46 | < 1.9 | < 1.2 |
| Benzene | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| Bromodichloromethane | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| Bromoform | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| Bromomethane | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| Carbon Disulfide | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| Carbon Tetrachloride | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| CFC-11 | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| CFC-12 | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| Chlorobenzene | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| Chlorodibromomethane | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| Chloroethane | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| Chloroform | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| Chloromethane | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| cis-1,2-Dichloroethene | 0.84 | 0.3 | 0.15 J | < 0.11 | 8.5 | 0.26 J |
| cis-1,3-Dichloropropene | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| Cyclohexane | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| Dichloromethane | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| Ethylbenzene | 0.11 J | < 0.27 | < 0.24 | < 0.11 | 5.1 | 1.4 |
| Isopropylbenzene | < 0.28 | < 0.27 | < 0.24 | < 0.11 | 0.42 J | 0.14 J |
| Methyl Acetate | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 0.56 | < 0.55 | < 0.48 | < 0.23 | < 0.95 | < 0.59 |
| Methylcyclohexane | < 0.28 | < 0.27 | < 0.24 | < 0.11 | 1.1 | 0.3 |
| Methyl-tert-butylether | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| Styrene (Monomer) | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| Tetrachloroethylene | < 0.28 | < 0.27 | < 0.24 | < 0.11 | 0.22 J | < 0.29 |
| Toluene | 4.6 | < 0.27 | < 0.24 | < 0.11 | 140 | 25 |
| Total Xylenes | 1.1 | < 0.27 | < 0.24 | < 0.11 | 24 | 6.9 |
| trans-1,2-Dichloroethene | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| trans-1,3-Dichloropropene | < 0.28 | < 0.27 | < 0.24 | < 0.11 | < 0.48 | < 0.29 |
| Trichloroethene | 8.4 | 2 | < 0.24 | < 0.11 | 100 | 2.5 |
| Vinyl chloride | 0.08 J | < 0.27 | < 0.24 | < 0.11 | 1.7 | < 0.29 |
| TVOCS | 17 | 3.8 | 1.5 | 0 | 280 | 37 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | P-9-14 | P-9-14 | H-5-14 | H-5-14 | M-9-14 | M-9-14 | M-9-14 |
|---------------------------------------|-----------|----------------|---------------|---------------|-----------|----------------|-------------|
| Sample Midpoint Depth (ft): | 32 | 44 | 46 | 50 | 24 | 46 | 57 |
| Date Sampled: | 11/6/2014 | 11/7/2014 | 11/7/2014 | 11/7/2014 | 11/5/2014 | 11/5/2014 | 11/5/2014 |
| Sampled ID: | P-9-14_32 | P-9-14_44 | H-5-14_46 | H-5-14_50 | M-9-14_24 | M-9-14_46 | M-9-14_57 |
| CONSTITUENT (unit in mg/kg) | | | | | | | |
| 1,1,1-Trichloroethane | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| 1,1,2,2-Tetrachloroethane | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 0.57 | < 0.41 | < 0.44 | < 0.5 | < 0.59 | < 0.21 | < 0.26 |
| 1,1,2-Trichloroethane | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| 1,1-Dichloroethene | < 0.28 | 0.11 J | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| 1,2,4-Trichlorobenzene | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| 1,2-Dibromo-3-chloropropane | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| 1,2-Dibromoethane | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| 1,2-Dichlorobenzene | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| 1,2-Dichloroethane | < 0.28 | 0.05 J | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| 1,2-Dichloropropane | < 0.28 | 0.097 J | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| 1,3-Dichlorobenzene | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| 1,4-Dichlorobenzene | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| 2-Butanone (MEK) | < 0.57 | 0.85 | 0.53 | 0.61 | < 0.59 | < 0.21 | < 0.26 |
| 4-Methyl-2-Pentanone | < 0.57 | 0.2 J | < 0.44 | < 0.5 | < 0.59 | < 0.21 | < 0.26 |
| Acetone | < 1.1 | 0.7 J | 0.61 J | 0.72 J | < 1.2 | < 0.43 | < 0.51 |
| Benzene | < 0.28 | 0.021 J | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| Bromodichloromethane | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| Bromoform | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| Bromomethane | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| Carbon Disulfide | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| Carbon Tetrachloride | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| CFC-11 | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| CFC-12 | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| Chlorobenzene | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| Chlorodibromomethane | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| Chloroethane | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| Chloroform | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| Chloromethane | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| cis-1,2-Dichloroethene | < 0.28 | 45 | 0.84 | 0.86 | < 0.29 | 1 | 0.29 |
| cis-1,3-Dichloropropene | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| Cyclohexane | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| Dichloromethane | < 0.28 | 0.15 J | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| Ethylbenzene | < 0.28 | < 0.2 | 0.12 J | < 0.25 | < 0.29 | 0.16 | < 0.13 |
| Isopropylbenzene | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| Methyl Acetate | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 0.57 | < 0.41 | < 0.44 | < 0.5 | < 0.59 | < 0.21 | < 0.26 |
| Methylcyclohexane | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | 0.041 J | < 0.13 |
| Methyl-tert-butylether | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| Styrene (Monomer) | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| Tetrachloroethene | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| Toluene | < 0.28 | 10 | 3.4 | < 0.25 | < 0.29 | 3.5 | < 0.13 |
| Total Xylenes | < 0.28 | < 0.2 | 0.72 | < 0.25 | < 0.29 | 0.77 | < 0.13 |
| trans-1,2-Dichloroethene | < 0.28 | 0.12 J | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| trans-1,3-Dichloropropene | < 0.28 | < 0.2 | < 0.22 | < 0.25 | < 0.29 | < 0.11 | < 0.13 |
| Trichloroethene | < 0.28 | 0.15 J | 10 | 6.2 | < 0.29 | 0.55 | 0.59 |
| Vinyl chloride | < 0.28 | 0.3 | < 0.22 | < 0.25 | < 0.29 | 0.16 | < 0.13 |
| TVOCS | 0 | 58 | 16 | 8.4 | 0 | 6.2 | 0.88 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | B-34-14 | B-34-14 | B-34-14 | B-34-14 | B-34-14 | B-34-14 |
|---------------------------------------|----------------|----------------|---------------|----------------|--------------|---------------|
| Sample Midpoint Depth (ft): | 1.5 | 4.5 | 7.5 | 10.5 | 13.5 | 16.5 |
| Date Sampled: | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 |
| Sampled ID: | B-34-14_1.5 | B-34-14_4.5 | B-34-14_7.5 | B-34-14_10.5 | B-34-14_13.5 | B-34-14_16.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | |
| 1,1,1-Trichloroethane | < 0.006 | 0.005 J | 0.18 J | < 0.23 | < 0.27 | < 0.23 |
| 1,1,2,2-Tetrachloroethane | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 0.011 | < 0.011 | < 1.7 | < 0.45 | < 0.54 | < 0.46 |
| 1,1,2-Trichloroethane | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| 1,1-Dichloroethene | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| 1,2,4-Trichlorobenzene | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| 1,2-Dibromo-3-chloropropane | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| 1,2-Dibromoethane | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| 1,2-Dichlorobenzene | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| 1,2-Dichloroethane | < 0.006 | 0.002 J | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| 1,2-Dichloropropane | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| 1,3-Dichlorobenzene | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| 1,4-Dichlorobenzene | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| 2-Butanone (MEK) | < 0.011 | < 0.011 | < 1.7 | < 0.45 | < 0.54 | < 0.46 |
| 4-Methyl-2-Pentanone | < 0.011 | < 0.011 | < 1.7 | < 0.45 | < 0.54 | < 0.46 |
| Acetone | 0.068 | 0.025 | < 3.4 | < 0.91 | < 1.1 | < 0.92 |
| Benzene | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| Bromodichloromethane | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| Bromoform | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| Bromomethane | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| Carbon Disulfide | < 0.006 | 0.003 J | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| Carbon Tetrachloride | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| CFC-11 | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| CFC-12 | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| Chlorobenzene | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| Chlorodibromomethane | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| Chloroethane | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| Chloroform | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| Chloromethane | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| cis-1,2-Dichloroethene | 0.01 | 0.069 | 9.6 | 0.1 J | < 0.27 | 0.11 J |
| cis-1,3-Dichloropropene | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| Cyclohexane | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| Dichloromethane | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| Ethylbenzene | < 0.006 | 0.004 J | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| Isopropylbenzene | < 0.006 | < 0.006 | 0.2 J | < 0.23 | < 0.27 | < 0.23 |
| Methyl Acetate | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 0.011 | < 0.011 | < 1.7 | < 0.45 | < 0.54 | < 0.46 |
| Methylcyclohexane | < 0.006 | 0.002 J | 2.1 | 0.047 J | < 0.27 | < 0.23 |
| Methyl-tert-butylether | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| Styrene (Monomer) | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| Tetrachloroethene | < 0.006 | 0.003 J | 2.4 | 0.067 J | < 0.27 | < 0.23 |
| Toluene | 0.005 J | 0.04 | 3 | 0.052 J | < 0.27 | < 0.23 |
| Total Xylenes | < 0.006 | 0.024 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| trans-1,2-Dichloroethene | < 0.006 | 0.002 J | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| trans-1,3-Dichloropropene | < 0.006 | < 0.006 | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| Trichloroethene | 0.014 | 0.069 | 200 | 1.5 | 0.37 | 0.91 |
| Vinyl chloride | < 0.006 | 0.004 J | < 0.85 | < 0.23 | < 0.27 | < 0.23 |
| TVOCs | 0.10 | 0.27 | 220 | 1.8 | 0.37 | 1.0 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | B-34-14 | B-34-14 | B-34-14 | B-34-14 | B-34-14 | B-34-14 |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Sample Midpoint Depth (ft): | 19.5 | 22.5 | 25.5 | 28.5 | 31.5 | 34.5 |
| Date Sampled: | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 |
| Sampled ID: | B-34-14_19.5 | B-34-14_22.5 | B-34-14_25.5 | B-34-14_28.5 | B-34-14_31.5 | B-34-14_34.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | |
| 1,1,1-Trichloroethane | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| 1,1,2,2-Tetrachloroethane | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 0.58 | < 0.5 | < 0.47 | < 0.53 | < 0.45 | < 0.42 |
| 1,1,2-Trichloroethane | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| 1,1-Dichloroethene | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| 1,2,4-Trichlorobenzene | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| 1,2-Dibromo-3-chloropropane | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| 1,2-Dibromoethane | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| 1,2-Dichlorobenzene | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| 1,2-Dichloroethane | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| 1,2-Dichloropropane | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| 1,3-Dichlorobenzene | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| 1,4-Dichlorobenzene | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| 2-Butanone (MEK) | < 0.58 | < 0.5 | < 0.47 | < 0.53 | < 0.45 | < 0.42 |
| 4-Methyl-2-Pentanone | < 0.58 | < 0.5 | < 0.47 | < 0.53 | < 0.45 | < 0.42 |
| Acetone | < 1.2 | < 1 | < 0.94 | < 1.1 | < 0.89 | < 0.85 |
| Benzene | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Bromodichloromethane | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Bromoform | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Bromomethane | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Carbon Disulfide | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Carbon Tetrachloride | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| CFC-11 | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| CFC-12 | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Chlorobenzene | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Chlorodibromomethane | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Chloroethane | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Chloroform | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Chloromethane | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| cis-1,2-Dichloroethene | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| cis-1,3-Dichloropropene | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Cyclohexane | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Dichloromethane | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Ethylbenzene | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | 3.2 |
| Isopropylbenzene | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | 0.41 |
| Methyl Acetate | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 0.58 | < 0.5 | < 0.47 | < 0.53 | < 0.45 | < 0.42 |
| Methylcyclohexane | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | 6.8 |
| Methyl-tert-butylether | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Styrene (Monomer) | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Tetrachloroethylene | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Toluene | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Total Xylenes | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | 0.69 |
| trans-1,2-Dichloroethene | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| trans-1,3-Dichloropropene | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Trichloroethene | 0.065 J | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| Vinyl chloride | < 0.29 | < 0.25 | < 0.23 | < 0.26 | < 0.22 | < 0.21 |
| TVOCS | 0.065 | 0 | 0 | 0 | 0 | 11 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | B-34-14 | B-34-14 | B-34-14 | B-34-14 | B-34-14 | B-34-14 |
|---------------------------------------|--------------|----------------|----------------|---------------|---------------|----------------|
| Sample Midpoint Depth (ft): | 37.5 | 40.5 | 43.5 | 46.5 | 49.5 | 52.5 |
| Date Sampled: | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 |
| Sampled ID: | B-34-14_37.5 | B-34-14_40.5 | B-34-14_43.5 | B-34-14_46.5 | B-34-14_49.5 | B-34-14_52.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | |
| 1,1,1-Trichloroethane | < 0.25 | < 0.004 | < 0.42 | 0.19 J | 1 J | < 0.29 |
| 1,1,2,2-Tetrachloroethane | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 0.51 | < 0.008 | < 0.84 | < 0.79 | < 2.1 | < 0.58 |
| 1,1,2-Trichloroethane | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| 1,1-Dichloroethene | < 0.25 | 0.003 J | 0.26 J | < 0.39 | < 1 | < 0.29 |
| 1,2,4-Trichlorobenzene | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| 1,2-Dibromo-3-chloropropane | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| 1,2-Dibromoethane | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| 1,2-Dichlorobenzene | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| 1,2-Dichloroethane | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| 1,2-Dichloropropane | < 0.25 | < 0.004 | 0.098 J | < 0.39 | < 1 | < 0.29 |
| 1,3-Dichlorobenzene | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| 1,4-Dichlorobenzene | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| 2-Butanone (MEK) | < 0.51 | < 0.008 | < 0.84 | < 0.79 | < 2.1 | < 0.58 |
| 4-Methyl-2-Pentanone | < 0.51 | < 0.008 | < 0.84 | < 0.79 | < 2.1 | < 0.58 |
| Acetone | < 1 | 0.011 J | < 1.7 | < 1.6 | < 4.1 | < 1.2 |
| Benzene | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| Bromodichloromethane | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| Bromoform | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| Bromomethane | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| Carbon Disulfide | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| Carbon Tetrachloride | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| CFC-11 | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| CFC-12 | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| Chlorobenzene | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| Chlorodibromomethane | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| Chloroethane | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| Chloroform | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| Chloromethane | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| cis-1,2-Dichloroethene | < 0.25 | 0.87 | 83 | < 0.39 | 33 | 6.3 |
| cis-1,3-Dichloropropene | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| Cyclohexane | < 0.25 | 0.006 | < 0.42 | 4.4 | 0.28 J | < 0.29 |
| Dichlormethane | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| Ethylbenzene | < 0.25 | 0.19 | 0.36 J | 21 | 29 | 2 |
| Isopropylbenzene | < 0.25 | 0.019 | < 0.42 | 3.2 | 2.2 | 0.14 J |
| Methyl Acetate | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 0.51 | < 0.008 | < 0.84 | < 0.79 | < 2.1 | < 0.58 |
| Methylcyclohexane | < 0.25 | 0.24 | 0.19 J | 90 | 23 | < 0.29 |
| Methyl-tert-butylether | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| Styrene (Monomer) | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| Tetrachloroethylene | < 0.25 | < 0.004 | < 0.42 | < 0.39 | 2 | 0.089 J |
| Toluene | < 0.25 | 0.43 | 44 | 19 | 290 | 20 |
| Total Xylenes | < 0.25 | 0.43 | 1.3 | 96 | 130 | 10 |
| trans-1,2-Dichloroethene | < 0.25 | 0.001 J | 0.21 J | < 0.39 | < 1 | < 0.29 |
| trans-1,3-Dichloropropene | < 0.25 | < 0.004 | < 0.42 | < 0.39 | < 1 | < 0.29 |
| Trichloroethylene | < 0.25 | 0.017 | 25 | < 0.39 | 11 | 0.88 |
| Vinyl chloride | < 0.25 | 0.031 | 0.59 | 0.74 | < 1 | < 0.29 |
| TVOCS | 0 | 2.3 | 160 | 240 | 520 | 39 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | B-34-14 | B-34-14 | B-34-14 | B-60-14 | B-60-14 | B-60-14 |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Sample Midpoint Depth (ft): | 55.5 | 55.5 | 58.5 | 1.5 | 4.5 | 7.5 |
| Date Sampled: | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 |
| Sampled ID: | B-34-14_55.5 | REP111714DM2 | B-34-14_58.5 | B-60-14_1.5 | B-60-14_4.5 | B-60-14_7.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | |
| 1,1,1-Trichloroethane | < 0.24 | 0.001 J | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| 1,1,2,2-Tetrachloroethane | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 0.48 | < 0.011 | < 0.54 | < 0.009 | < 0.35 | < 0.48 |
| 1,1,2-Trichloroethane | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| 1,1-Dichloroethene | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| 1,2,4-Trichlorobenzene | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| 1,2-Dibromo-3-chloropropane | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| 1,2-Dibromoethane | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| 1,2-Dichlorobenzene | < 0.24 | < 0.005 | < 0.27 | 0.001 J | 0.18 | 0.43 |
| 1,2-Dichloroethane | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| 1,2-Dichloropropane | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| 1,3-Dichlorobenzene | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| 1,4-Dichlorobenzene | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | 0.078 J |
| 2-Butanone (MEK) | < 0.48 | < 0.11 | < 0.54 | < 0.009 | < 0.35 | < 0.48 |
| 4-Methyl-2-Pentanone | < 0.48 | < 0.11 | < 0.54 | < 0.009 | < 0.35 | < 0.48 |
| Acetone | < 0.95 | < 0.022 | < 1.1 | 0.021 | < 0.7 | < 0.95 |
| Benzene | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| Bromodichloromethane | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| Bromoform | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| Bromomethane | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| Carbon Disulfide | < 0.24 | < 0.005 | < 0.27 | 0.001 J | < 0.18 | < 0.24 |
| Carbon Tetrachloride | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| CFC-11 | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| CFC-12 | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| Chlorobenzene | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| Chlorodibromomethane | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| Chloroethane | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| Chloroform | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| Chloromethane | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| cis-1,2-Dichloroethene | 0.84 | 0.2 | 0.34 | 0.038 | 0.11 J | 0.16 J |
| cis-1,3-Dichloropropene | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| Cyclohexane | < 0.24 | < 0.005 | 0.062 J | < 0.005 | 0.1 J | 0.44 |
| Dichloromethane | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| Ethylbenzene | 0.12 J | 0.064 | 0.36 | 0.002 J | 1.5 | 3.4 |
| Isopropylbenzene | < 0.24 | 0.006 | 0.29 | < 0.005 | 0.32 | 0.61 |
| Methyl Acetate | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 0.48 | < 0.11 | < 0.54 | < 0.009 | < 0.35 | < 0.48 |
| Methylcyclohexane | 0.13 J | 0.053 | 7.2 | 0.003 J | 3.3 | 12 |
| Methyl-tert-butylether | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| Styrene (Monomer) | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| Tetrachloroethylene | < 0.24 | 0.006 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| Toluene | 1.2 | 0.86 | 0.16 J | 0.025 | 12 | 49 |
| Total Xylenes | 0.51 | 0.3 | 0.12 J | 0.007 | 7.5 | 18 |
| trans-1,2-Dichloroethene | < 0.24 | < 0.005 | < 0.27 | 0.002 J | < 0.18 | < 0.24 |
| trans-1,3-Dichloropropene | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| Trichloroethene | 0.082 J | 0.019 | 0.056 J | 0.022 | 0.053 J | 0.062 J |
| Vinyl chloride | < 0.24 | < 0.005 | < 0.27 | < 0.005 | < 0.18 | < 0.24 |
| TVOCs | 2.9 | 1.5 | 8.6 | 0.12 | 25 | 84 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | B-60-14 | B-60-14 | B-60-14 | B-60-14 | B-60-14 | B-60-14 |
|---------------------------------------|----------------|----------------|----------------|-----------------|----------------|----------------|
| Sample Midpoint Depth (ft): | 10.5 | 13.5 | 16.5 | 19.5 | 19.5 | 22.5 |
| Date Sampled: | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 |
| Sampled ID: | B-60-14_10.5 | B-60-14_13.5 | B-60-14_16.5 | B-60-14_19.5 | REP111714DM3 | B-60-14_22.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | |
| 1,1,1-Trichloroethane | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| 1,1,2,2-Tetrachloroethane | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 0.46 | < 0.008 | < 0.47 | < 0.009 | < 0.009 | < 0.009 |
| 1,1,2-Trichloroethane | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| 1,1-Dichloroethene | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| 1,2,4-Trichlorobenzene | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| 1,2-Dibromo-3-chloropropane | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| 1,2-Dibromoethane | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| 1,2-Dichlorobenzene | 0.47 | 0.036 | 0.51 | < 0.004 | < 0.004 | < 0.005 |
| 1,2-Dichloroethane | < 0.23 | < 0.004 | < 0.24 | 0.0009 J | < 0.004 | < 0.005 |
| 1,2-Dichloropropane | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| 1,3-Dichlorobenzene | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| 1,4-Dichlorobenzene | 0.11 J | 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| 2-Butanone (MEK) | < 0.46 | 0.008 | < 0.47 | < 0.009 | < 0.009 | 0.018 |
| 4-Methyl-2-Pentanone | < 0.46 | < 0.008 | < 0.47 | < 0.009 | < 0.009 | < 0.009 |
| Acetone | < 0.92 | 0.029 | < 0.95 | < 0.017 | 0.007 J | 0.12 |
| Benzene | 0.056 J | 0.008 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| Bromodichloromethane | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| Bromoform | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| Bromomethane | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| Carbon Disulfide | < 0.23 | 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| Carbon Tetrachloride | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| CFC-11 | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| CFC-12 | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| Chlorobenzene | 0.36 | 0.033 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| Chlorodibromomethane | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| Chloroethane | < 0.23 | 0.006 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| Chloroform | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| Chloromethane | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| cis-1,2-Dichloroethene | < 0.23 | 0.009 | < 0.24 | 0.012 | 0.008 | 0.005 |
| cis-1,3-Dichloropropene | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| Cyclohexane | 0.098 J | 0.039 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| Dichlormethane | < 0.23 | < 0.004 | < 0.24 | 0.007 | < 0.004 | < 0.005 |
| Ethylbenzene | 1.6 | 0.2 | 0.12 J | < 0.004 | < 0.004 | < 0.005 |
| Isopropylbenzene | 0.12 J | 0.02 | 0.12 J | < 0.004 | < 0.004 | < 0.005 |
| Methyl Acetate | 0.53 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 0.46 | < 0.008 | < 0.47 | < 0.009 | < 0.009 | < 0.009 |
| Methylcyclohexane | 1.6 | 0.26 | 0.2 J | < 0.004 | < 0.004 | < 0.005 |
| Methyl-tert-butylether | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| Styrene (Monomer) | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| Tetrachloroethene | < 0.23 | 0.001 J | < 0.24 | < 0.004 | < 0.004 | 0.003 J |
| Toluene | 1.4 | 0.16 | 0.27 | 0.001 J | 0.002 J | < 0.005 |
| Total Xylenes | 7.8 | 1.3 | 0.41 | 0.001 J | 0.001 J | 0.001 J |
| trans-1,2-Dichloroethene | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| trans-1,3-Dichloropropene | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| Trichloroethene | < 0.23 | 0.011 | 0.076 J | 0.034 | 0.018 | 0.063 |
| Vinyl chloride | < 0.23 | < 0.004 | < 0.24 | < 0.004 | < 0.004 | < 0.005 |
| TVOCS | 14 | 2.1 | 2.7 | 0.063 | 0.041 | 0.21 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | B-60-14 | B-60-14 | VP-27-14 | VP-27-14 | VP-27-14 |
|---------------------------------------|----------------|----------------|-----------------|----------------|----------------|
| Sample Midpoint Depth (ft): | 25.5 | 28.5 | 1.5 | 1.5 | 4.5 |
| Date Sampled: | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 |
| Sampled ID: | B-60-14_25.5 | B-60-14_28.5 | VP-27-14_1.5 | REP111714DM1 | VP-27-14_4.5 |
| CONSTITUENT (unit in mg/kg) | | | | | |
| 1,1,1-Trichloroethane | < 0.004 | < 0.004 | < 0.003 | < 0.004 | 0.48 |
| 1,1,2-Tetrachloroethane | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 0.008 | < 0.009 | < 0.005 | < 0.008 | < 0.47 |
| 1,1,2-Trichloroethane | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| 1,1-Dichloroethene | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| 1,2,4-Trichlorobenzene | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| 1,2-Dibromo-3-chloropropane | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| 1,2-Dibromoethane | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| 1,2-Dichlorobenzene | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| 1,2-Dichloroethane | < 0.004 | < 0.004 | < 0.003 | < 0.004 | 0.089 J |
| 1,2-Dichloropropane | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| 1,3-Dichlorobenzene | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| 1,4-Dichlorobenzene | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| 2-Butanone (MEK) | < 0.008 | < 0.009 | < 0.005 | < 0.008 | < 0.47 |
| 4-Methyl-2-Pentanone | < 0.008 | < 0.009 | < 0.005 | < 0.008 | < 0.47 |
| Acetone | < 0.016 | < 0.017 | 0.039 | 0.052 | < 0.93 |
| Benzene | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Bromodichloromethane | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Bromoform | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Bromomethane | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Carbon Disulfide | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Carbon Tetrachloride | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| CFC-11 | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| CFC-12 | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Chlorobenzene | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Chlorodibromomethane | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Chloroethane | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Chloroform | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Chloromethane | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| cis-1,2-Dichloroethene | 0.001 J | < 0.004 | 0.0007 J | 0.001 J | 2.8 |
| cis-1,3-Dichloropropene | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Cyclohexane | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Dichloromethane | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Ethylbenzene | 0.002 J | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Isopropylbenzene | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Methyl Acetate | < 0.004 | < 0.004 | < 0.003 | < 0.004 | 0.51 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 0.008 | < 0.009 | < 0.005 | < 0.008 | < 0.47 |
| Methylcyclohexane | 0.01 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Methyl-tert-butylether | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Styrene (Monomer) | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Tetrachloroethene | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Toluene | 0.011 | 0.001 J | < 0.003 | 0.001 J | 0.16 J |
| Total Xylenes | 0.008 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| trans-1,2-Dichloroethene | < 0.004 | < 0.004 | < 0.003 | < 0.004 | 0.64 |
| trans-1,3-Dichloropropene | < 0.004 | < 0.004 | < 0.003 | < 0.004 | < 0.23 |
| Trichloroethene | 0.002 J | < 0.004 | 0.005 | 0.005 | 1.9 |
| Vinyl chloride | < 0.004 | < 0.004 | < 0.003 | < 0.004 | 0.94 |
| TVOCs | 0.034 | 0.001 | 0.045 | 0.059 | 8.2 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | VP-27-14 | VP-27-14 | VP-27-14 | VP-27-14 | VP-27-14 | VP-27-14 |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Sample Midpoint Depth (ft): | 7.5 | 10.5 | 13.5 | 16.5 | 19.5 | 22.5 |
| Date Sampled: | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 |
| Sampled ID: | VP-27-14_7.5 | VP-27-14_10.5 | VP-27-14_13.5 | VP-27-14_16.5 | VP-27-14_19.5 | VP-27-14_22.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | |
| 1,1,1-Trichloroethane | 0.73 | < 0.22 | < 0.25 | 0.35 | < 0.005 | 0.001 J |
| 1,1,2,2-Tetrachloroethane | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 0.44 | < 0.43 | < 0.5 | < 0.48 | < 0.009 | < 0.009 |
| 1,1,2-Trichloroethane | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| 1,1-Dichloroethene | 0.044 J | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| 1,2,4-Trichlorobenzene | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| 1,2-Dibromo-3-chloropropane | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| 1,2-Dibromoethane | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| 1,2-Dichlorobenzene | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| 1,2-Dichloroethane | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| 1,2-Dichloropropane | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| 1,3-Dichlorobenzene | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| 1,4-Dichlorobenzene | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| 2-Butanone (MEK) | < 0.44 | < 0.43 | < 0.5 | < 0.48 | < 0.009 | < 0.009 |
| 4-Methyl-2-Pentanone | < 0.44 | < 0.43 | < 0.5 | < 0.48 | < 0.009 | < 0.009 |
| Acetone | < 0.87 | < 0.86 | < 1 | < 0.95 | 0.022 | 0.019 |
| Benzene | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| Bromodichloromethane | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| Bromoform | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| Bromomethane | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| Carbon Disulfide | < 0.22 | < 0.22 | < 0.25 | < 0.24 | 0.003 J | 0.001 J |
| Carbon Tetrachloride | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| CFC-11 | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| CFC-12 | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| Chlorobenzene | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| Chlorodibromomethane | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| Chloroethane | 0.089 J | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| Chloroform | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| Chloromethane | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| cis-1,2-Dichloroethene | 0.23 | 3.7 | 0.07 J | 2.6 | 0.046 | 0.096 |
| cis-1,3-Dichloropropene | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| Cyclohexane | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| Dichloromethane | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| Ethylbenzene | < 0.22 | 0.072 J | < 0.25 | 0.5 | 0.001 J | < 0.005 |
| Isopropylbenzene | < 0.22 | 0.12 J | < 0.25 | 0.079 J | < 0.005 | < 0.005 |
| Methyl Acetate | 0.16 J | < 0.22 | < 0.25 | 1.2 | < 0.005 | < 0.005 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 0.44 | < 0.43 | < 0.5 | < 0.48 | < 0.009 | < 0.009 |
| Methylcyclohexane | 0.059 J | 0.94 | < 0.25 | 0.31 | 0.004 J | 0.002 J |
| Methyl-tert-butylether | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| Styrene (Monomer) | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| Tetrachloroethylene | < 0.22 | 0.18 J | < 0.25 | 0.068 J | 0.039 | 0.059 |
| Toluene | 0.2 J | 1.5 | 0.056 J | 11 | 0.017 | 0.011 |
| Total Xylenes | < 0.22 | 0.18 J | < 0.25 | 2.4 | 0.004 J | 0.002 J |
| trans-1,2-Dichloroethene | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| trans-1,3-Dichloropropene | < 0.22 | < 0.22 | < 0.25 | < 0.24 | < 0.005 | < 0.005 |
| Trichloroethene | 1.1 | 1.4 | 0.41 | 2 | 0.5 | 0.51 |
| Vinyl chloride | 0.11 J | 0.2 J | < 0.25 | 0.38 | < 0.005 | < 0.005 |
| TVOCs | 4.1 | 8.4 | 0.54 | 22 | 0.64 | 0.70 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | VP-27-14 | VP-27-14 | VP-27-14 | VP-27-14 | VP-27-14 | VP-27-14 |
|---------------------------------------|----------------|----------------|---------------|-----------------|---------------|----------------|
| Sample Midpoint Depth (ft): | 25.5 | 28.5 | 31.5 | 34.5 | 37.5 | 40.5 |
| Date Sampled: | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 |
| Sampled ID: | VP-27-14_25.5 | VP-27-14_28.5 | VP-27-14_31.5 | VP-27-14_34.5 | VP-27-14_37.5 | VP-27-14_40.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | |
| 1,1,1-Trichloroethane | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| 1,1,2,2-Tetrachloroethane | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 0.011 | < 0.01 | < 0.48 | < 0.009 | < 0.42 | < 0.41 |
| 1,1,2-Trichloroethane | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| 1,1-Dichloroethene | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| 1,2,4-Trichlorobenzene | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| 1,2-Dibromo-3-chloropropane | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| 1,2-Dibromoethane | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| 1,2-Dichlorobenzene | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| 1,2-Dichloroethane | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| 1,2-Dichloropropane | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| 1,3-Dichlorobenzene | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| 1,4-Dichlorobenzene | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| 2-Butanone (MEK) | < 0.011 | < 0.01 | < 0.48 | < 0.009 | < 0.42 | < 0.41 |
| 4-Methyl-2-Pentanone | < 0.011 | < 0.01 | < 0.48 | < 0.009 | < 0.42 | < 0.41 |
| Acetone | 0.013 J | 0.014 J | < 0.96 | 0.016 J | < 0.84 | < 0.82 |
| Benzene | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| Bromodichloromethane | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| Bromoform | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| Bromomethane | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| Carbon Disulfide | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| Carbon Tetrachloride | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| CFC-11 | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| CFC-12 | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| Chlorobenzene | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| Chlorodibromomethane | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| Chloroethane | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| Chloroform | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| Chloromethane | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| cis-1,2-Dichloroethene | 0.002 J | 0.002 J | < 0.24 | 0.002 J | < 0.21 | 0.47 |
| cis-1,3-Dichloropropene | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| Cyclohexane | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| Dichlormethane | < 0.005 | 0.004 J | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| Ethylbenzene | < 0.005 | < 0.005 | < 0.24 | < 0.005 | 2.2 | 0.29 |
| Isopropylbenzene | < 0.005 | < 0.005 | < 0.24 | < 0.005 | 0.31 | < 0.21 |
| Methyl Acetate | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 0.011 | < 0.01 | < 0.48 | < 0.009 | < 0.42 | < 0.41 |
| Methylcyclohexane | < 0.005 | < 0.005 | < 0.24 | < 0.005 | 0.14 J | < 0.21 |
| Methyl-tert-butylether | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| Styrene (Monomer) | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| Tetrachloroethene | 0.009 | 0.006 | < 0.24 | 0.002 J | < 0.21 | 0.21 |
| Toluene | 0.012 | 0.004 J | < 0.24 | 0.004 J | 0.41 | 6.2 |
| Total Xylenes | 0.002 J | < 0.005 | < 0.24 | 0.0009 J | 19 | 1.8 |
| trans-1,2-Dichloroethene | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| trans-1,3-Dichloropropene | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | < 0.21 |
| Trichloroethene | 0.014 | 0.01 | 0.12 J | 0.007 | < 0.21 | 0.36 |
| Vinyl chloride | < 0.005 | < 0.005 | < 0.24 | < 0.005 | < 0.21 | 0.042 J |
| TVOcs | 0.052 | 0.040 | 0.12 | 0.032 | 22 | 9.2 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | VP-27-14 | VP-27-14 | VP-27-14 | VP-27-14 | VP-27-14 | VP-27-14 |
|---------------------------------------|---------------|---------------|---------------|---------------|----------------|----------------|
| Sample Midpoint Depth (ft): | 43.5 | 46.5 | 49.5 | 52.5 | 55.5 | 58.5 |
| Date Sampled: | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 | 11/17/2014 |
| Sampled ID: | VP-27-14_43.5 | VP-27-14_46.5 | VP-27-14_49.5 | VP-27-14_52.5 | VP-27-14_55.5 | VP-27-14_58.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | |
| 1,1,1-Trichloroethane | < 0.43 | 41 | < 0.28 | < 0.2 | 0.002 J | 0.005 |
| 1,1,2,2-Tetrachloroethane | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 0.86 | < 41 | < 0.56 | < 0.4 | < 0.009 | < 0.008 |
| 1,1,2-Trichloroethane | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| 1,1-Dichloroethene | < 0.43 | 4.1 J | < 0.28 | < 0.2 | < 0.004 | 0.001 J |
| 1,2,4-Trichlorobenzene | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| 1,2-Dibromo-3-chloropropane | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| 1,2-Dibromoethane | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| 1,2-Dichlorobenzene | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| 1,2-Dichloroethane | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | 0.001 J |
| 1,2-Dichloropropane | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| 1,3-Dichlorobenzene | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| 1,4-Dichlorobenzene | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| 2-Butanone (MEK) | < 0.86 | < 41 | < 0.56 | < 0.4 | < 0.009 | < 0.008 |
| 4-Methyl-2-Pentanone | < 0.86 | < 41 | < 0.56 | < 0.4 | < 0.009 | 0.005 J |
| Acetone | < 1.7 | < 82 | < 1.1 | < 0.79 | 0.01 J | 0.017 J |
| Benzene | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| Bromodichloromethane | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| Bromoform | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| Bromomethane | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| Carbon Disulfide | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | 0.002 J |
| Carbon Tetrachloride | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| CFC-11 | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| CFC-12 | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| Chlorobenzene | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| Chlorodibromomethane | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| Chloroethane | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| Chloroform | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| Chloromethane | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| cis-1,2-Dichloroethene | 11 | 92 | 0.38 | 5.7 | 0.18 J | 3.1 |
| cis-1,3-Dichloropropene | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| Cyclohexane | < 0.43 | < 20 | < 0.28 | < 0.2 | 0.002 J | 0.004 |
| Dichloromethane | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| Ethylbenzene | 1.2 | 41 | 1.7 | 0.12 J | 0.046 | 0.13 |
| Isopropylbenzene | < 0.43 | < 20 | 0.15 J | < 0.2 | 0.003 J | 0.011 |
| Methyl Acetate | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 0.86 | < 41 | < 0.56 | < 0.4 | < 0.009 | < 0.008 |
| Methylcyclohexane | 0.2 J | 39 | 0.58 | 0.06 J | 0.062 | 0.13 |
| Methyl-tert-butylether | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| Styrene (Monomer) | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| Tetrachloroethene | < 0.43 | 7.7 J | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| Toluene | 51 | 1400 | 17 | 5.2 | 0.29 | 3.2 |
| Total Xylenes | 5.8 | 190 | 9.1 | 0.56 | 0.2 | 0.56 |
| trans-1,2-Dichloroethene | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| trans-1,3-Dichloropropene | < 0.43 | < 20 | < 0.28 | < 0.2 | < 0.004 | < 0.004 |
| Trichloroethene | 25 | 3000 | 0.14 J | < 0.2 | 0.002 J | 0.021 |
| Vinyl chloride | 0.3 J | < 20 | < 0.28 | 0.11 J | 0.026 | 0.036 |
| TVOCs | 95 | 4800 | 29 | 12 | 0.83 | 7.2 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nN-9-14 | nN-9-14 | nN-9-14 | nN-9-14 | nN-9-14 | nN-9-14 |
|---------------------------------------|---------------|----------------|----------------|--------------|--------------|---------------|
| Sample Midpoint Depth (ft): | 1.5 | 4.5 | 7.5 | 10.5 | 13.5 | 16.5 |
| Date Sampled: | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 |
| Sampled ID: | nN-9-14_1.5 | nN-9-14_4.5 | nN-9-14_7.5 | nN-9-14_10.5 | nN-9-14_13.5 | nN-9-14_16.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | |
| 1,1,1-Trichloroethane | < 0.22 | 0.22 J | 0.15 J | 1.2 J | 32 | < 0.23 |
| 1,1,2,2-Tetrachloroethane | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 0.44 | < 0.46 | < 0.41 | < 5.1 | < 10 | < 0.47 |
| 1,1,2-Trichloroethane | < 0.22 | < 0.23 | < 0.2 | < 2.6 | 2.9 J | < 0.23 |
| 1,1-Dichloroethene | < 0.22 | < 0.23 | 0.092 J | 2.5 J | 2.4 J | < 0.23 |
| 1,2,4-Trichlorobenzene | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| 1,2-Dibromo-3-chloropropane | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| 1,2-Dibromoethane | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| 1,2-Dichlorobenzene | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| 1,2-Dichloroethane | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| 1,2-Dichloropropane | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| 1,3-Dichlorobenzene | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| 1,4-Dichlorobenzene | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| 2-Butanone (MEK) | 0.54 | 0.51 | 0.59 | < 5.1 | < 10 | 0.67 |
| 4-Methyl-2-Pentanone | < 0.44 | < 0.46 | < 0.41 | < 5.1 | < 10 | < 0.47 |
| Acetone | 0.57 J | 0.6 J | 0.63 J | < 10 | < 20 | 0.68 J |
| Benzene | < 0.22 | < 0.23 | 0.024 J | < 2.6 | < 5 | < 0.23 |
| Bromodichloromethane | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| Bromoform | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| Bromomethane | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| Carbon Disulfide | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| Carbon Tetrachloride | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| CFC-11 | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| CFC-12 | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| Chlorobenzene | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| Chlorodibromomethane | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| Chloroethane | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| Chloroform | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| Chloromethane | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| cis-1,2-Dichloroethene | < 0.22 | 0.22 J | 34 | 840 | 580 | 1.7 |
| cis-1,3-Dichloropropene | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| Cyclohexane | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| Dichloromethane | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| Ethylbenzene | < 0.22 | < 0.23 | 0.28 | 11 | 120 | 0.09 J |
| Isopropylbenzene | < 0.22 | 0.071 J | 0.32 | 1.1 J | 13 | < 0.23 |
| Methyl Acetate | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 0.44 | < 0.46 | < 0.41 | < 5.1 | < 10 | < 0.47 |
| Methylcyclohexane | < 0.22 | 0.14 J | 0.4 | 4.2 | 10 | < 0.23 |
| Methyl-tert-butylether | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| Styrene (Monomer) | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| Tetrachloroethene | < 0.22 | 0.18 J | 0.36 | 0.7 J | 13 | 0.16 J |
| Toluene | < 0.22 | 0.18 J | 1.8 | 210 | 780 | 0.72 |
| Total Xylenes | < 0.22 | 0.3 | 2 | 48 | 700 | 0.6 |
| trans-1,2-Dichloroethene | < 0.22 | 0.098 J | 0.098 J | < 2.6 | < 5 | < 0.23 |
| trans-1,3-Dichloropropene | < 0.22 | < 0.23 | < 0.2 | < 2.6 | < 5 | < 0.23 |
| Trichloroethene | < 0.22 | 0.28 | 0.14 J | 1.1 J | 2300 | 7.8 |
| Vinyl chloride | < 0.22 | 0.7 | 12 | 37 | 6.2 | < 0.23 |
| TVOcs | 1.1 | 3.7 | 54 | 960 | 4600 | 12 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nN-9-14 | nN-9-14 | nN-9-14 | nN-9-14 | nN-9-14 | nN-9-14 |
|---------------------------------------|---------------|----------------|--------------|---------------|---------------|---------------|
| Sample Midpoint Depth (ft): | 19.5 | 22.5 | 25.5 | 28.5 | 37.5 | 40.5 |
| Date Sampled: | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 |
| Sampled ID: | nN-9-14_19.5 | nN-9-14_22.5 | nN-9-14_25.5 | nN-9-14_28.5 | nN-9-14_37.5 | nN-9-14_40.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | |
| 1,1,1-Trichloroethane | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | 9.2 |
| 1,1,2,2-Tetrachloroethane | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 0.54 | < 0.46 | < 0.63 | < 0.57 | < 0.5 | < 4.2 |
| 1,1,2-Trichloroethane | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| 1,1-Dichloroethene | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | 0.92 J |
| 1,2,4-Trichlorobenzene | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| 1,2-Dibromo-3-chloropropane | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| 1,2-Dibromoethane | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| 1,2-Dichlorobenzene | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| 1,2-Dichloroethane | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| 1,2-Dichloropropane | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| 1,3-Dichlorobenzene | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| 1,4-Dichlorobenzene | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| 2-Butanone (MEK) | 0.69 | 0.62 | 0.8 | 0.77 | 0.57 | < 4.2 |
| 4-Methyl-2-Pentanone | < 0.54 | < 0.46 | < 0.63 | < 0.57 | < 0.5 | < 4.2 |
| Acetone | 0.75 J | 0.68 J | 0.9 J | 0.87 J | 0.62 J | < 8.4 |
| Benzene | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| Bromodichloromethane | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| Bromoform | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| Bromomethane | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| Carbon Disulfide | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| Carbon Tetrachloride | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| CFC-11 | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| CFC-12 | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| Chlorobenzene | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| Chlorodibromomethane | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| Chloroethane | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| Chloroform | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| Chloromethane | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| cis-1,2-Dichloroethene | < 0.27 | 0.05 J | < 0.31 | 0.11 J | < 0.25 | 56 |
| cis-1,3-Dichloropropene | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| Cyclohexane | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | 1 J |
| Dichlormethane | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| Ethylbenzene | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | 12 |
| Isopropylbenzene | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | 1.1 J |
| Methyl Acetate | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 0.54 | < 0.46 | < 0.63 | < 0.57 | < 0.5 | < 4.2 |
| Methylcyclohexane | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | 14 |
| Methyl-tert-butylether | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| Styrene (Monomer) | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| Tetrachloroethene | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | 5.2 |
| Toluene | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | 390 |
| Total Xylenes | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | 57 |
| trans-1,2-Dichloroethene | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| trans-1,3-Dichloropropene | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | < 2.1 |
| Trichloroethene | < 0.27 | 0.049 J | < 0.31 | < 0.28 | < 0.25 | 830 |
| Vinyl chloride | < 0.27 | < 0.23 | < 0.31 | < 0.28 | < 0.25 | 1.1 J |
| TVOCS | 1.4 | 1.4 | 1.7 | 1.8 | 1.2 | 1400 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nN-9-14 | nN-9-14 | nN-9-14 | nN-9-14 | nN-9-14 | nN-9-14 |
|---------------------------------------|---------------|--------------|---------------|---------------|---------------|---------------|
| Sample Midpoint Depth (ft): | 43.5 | 46.5 | 49.5 | 52.5 | 55.5 | 58.5 |
| Date Sampled: | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 |
| Sampled ID: | nN-9-14_43.5 | nN-9-14_46.5 | nN-9-14_49.5 | nN-9-14_52.5 | nN-9-14_55.5 | nN-9-14_58.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | |
| 1,1,1-Trichloroethane | 0.5 | 14 | 0.13 J | < 0.21 | < 0.28 | < 0.25 |
| 1,1,2,2-Tetrachloroethane | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 0.46 | < 1.6 | < 0.93 | < 0.41 | < 0.57 | < 0.5 |
| 1,1,2-Trichloroethane | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| 1,1-Dichloroethene | 0.14 J | 1.4 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| 1,2,4-Trichlorobenzene | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| 1,2-Dibromo-3-chloropropane | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| 1,2-Dibromoethane | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| 1,2-Dichlorobenzene | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| 1,2-Dichloroethane | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| 1,2-Dichloropropane | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| 1,3-Dichlorobenzene | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| 1,4-Dichlorobenzene | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| 2-Butanone (MEK) | 0.56 | < 1.6 | 0.58 J | 0.5 | 0.67 | 0.59 |
| 4-Methyl-2-Pentanone | < 0.46 | < 1.6 | < 0.93 | < 0.41 | < 0.57 | < 0.5 |
| Acetone | 0.55 J | < 3.2 | < 1.9 | 0.52 J | 0.76 J | 0.67 J |
| Benzene | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| Bromodichloromethane | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| Bromoform | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| Bromomethane | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| Carbon Disulfide | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| Carbon Tetrachloride | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| CFC-11 | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| CFC-12 | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| Chlorobenzene | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| Chlorodibromomethane | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| Chloroethane | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| Chloroform | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| Chloromethane | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| cis-1,2-Dichloroethene | 18 | 21 | 5.4 | 8.7 | < 0.28 | 0.41 |
| cis-1,3-Dichloropropene | < 0.23 | < 0.81 | 0.46 | < 0.21 | < 0.28 | < 0.25 |
| Cyclohexane | < 0.23 | 1.4 | 0.32 J | < 0.21 | < 0.28 | < 0.25 |
| Dichloromethane | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| Ethylbenzene | < 0.23 | 78 | 2.2 | 0.12 J | < 0.28 | < 0.25 |
| Isopropylbenzene | < 0.23 | 3.4 | 0.18 J | < 0.21 | < 0.28 | < 0.25 |
| Methyl Acetate | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 0.46 | < 1.6 | < 0.93 | < 0.41 | < 0.57 | < 0.5 |
| Methylcyclohexane | < 0.23 | 38 | 5.4 | < 0.21 | < 0.28 | < 0.25 |
| Methyl-tert-butylether | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| Styrene (Monomer) | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| Tetrachloroethylene | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| Toluene | 6.4 | 2000 | 60 | 7.1 | < 0.28 | < 0.25 |
| Total Xylenes | 0.17 J | 350 | 10 | 0.54 | < 0.28 | < 0.25 |
| trans-1,2-Dichloroethene | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| trans-1,3-Dichloropropene | < 0.23 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | < 0.25 |
| Trichloroethylene | 51 | < 0.81 | < 0.46 | < 0.21 | < 0.28 | 0.42 |
| Vinyl chloride | 1.4 | 9.4 | 0.25 J | 0.14 J | < 0.28 | < 0.25 |
| TVCs | | | | | | |
| | 78 | 2500 | 84 | 18 | 1.4 | 2.1 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | O-8-14 | O-8-14 | nQ-10-14R | nQ-10-14R | nQ-10-14R | nQ-10-14R |
|---------------------------------------|---------------|----------------|----------------|----------------|----------------|----------------|
| Sample Midpoint Depth (ft): | 1.5 | 4.5 | 31.5 | 34.5 | 37.5 | 40.5 |
| Date Sampled: | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 |
| Sampled ID: | O-8-14_1.5 | O-8-14_4.5 | nQ-10-14R_31.5 | nQ-10-14R_34.5 | nQ-10-14R_37.5 | nQ-10-14R_40.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | |
| 1,1,1-Trichloroethane | < 0.057 | 0.18 J | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| 1,1,2,2-Tetrachloroethane | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 0.11 | < 0.5 | < 0.6 | < 0.72 | < 0.57 | < 0.71 |
| 1,1,2-Trichloroethane | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| 1,1-Dichloroethene | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| 1,2,4-Trichlorobenzene | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| 1,2-Dibromo-3-chloropropane | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| 1,2-Dibromoethane | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| 1,2-Dichlorobenzene | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| 1,2-Dichloroethane | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| 1,2-Dichloropropane | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| 1,3-Dichlorobenzene | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| 1,4-Dichlorobenzene | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| 2-Butanone (MEK) | 0.13 | 0.63 | 0.76 | 0.91 | 0.7 | 0.87 |
| 4-Methyl-2-Pentanone | < 0.11 | < 0.5 | < 0.6 | < 0.72 | < 0.57 | < 0.71 |
| Acetone | 0.16 J | 0.73 J | 0.86 J | 1 J | 0.73 J | 0.94 J |
| Benzene | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| Bromodichloromethane | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| Bromoform | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| Bromomethane | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| Carbon Disulfide | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| Carbon Tetrachloride | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| CFC-11 | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| CFC-12 | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| Chlorobenzene | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| Chlorodibromomethane | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| Chloroethane | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| Chloroform | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| Chloromethane | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| cis-1,2-Dichloroethene | < 0.057 | 0.24 J | < 0.3 | < 0.36 | < 0.28 | 0.13 J |
| cis-1,3-Dichloropropene | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| Cyclohexane | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| Dichloromethane | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| Ethylbenzene | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | 0.46 |
| Isopropylbenzene | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| Methyl Acetate | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 0.11 | < 0.5 | < 0.6 | < 0.72 | < 0.57 | < 0.71 |
| Methylcyclohexane | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | 0.18 J |
| Methyl-tert-butylether | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| Styrene (Monomer) | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| Tetrachloroethene | < 0.057 | 0.19 J | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| Toluene | < 0.057 | 0.13 J | < 0.3 | < 0.36 | < 0.28 | 0.16 J |
| Total Xylenes | < 0.057 | 0.15 J | < 0.3 | < 0.36 | < 0.28 | 1.4 |
| trans-1,2-Dichloroethene | < 0.057 | 0.061 J | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| trans-1,3-Dichloropropene | < 0.057 | < 0.25 | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| Trichloroethene | < 0.057 | 0.21 J | < 0.3 | < 0.36 | < 0.28 | 0.095 J |
| Vinyl chloride | < 0.057 | 0.087 J | < 0.3 | < 0.36 | < 0.28 | < 0.36 |
| TVOCs | 0.29 | 2.6 | 1.6 | 1.9 | 1.4 | 4.2 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Boring ID: | nQ-10-14R | nQ-10-14R | nQ-10-14R | nQ-10-14R | nQ-10-14R | nQ-10-14R |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Sample Midpoint Depth (ft): | 43.5 | 46.5 | 49.5 | 52.5 | 55.5 | 58.5 |
| Date Sampled: | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 | 12/17/2014 |
| Sampled ID: | nQ-10-14R_43.5 | nQ-10-14R_46.5 | nQ-10-14R_49.5 | nQ-10-14R_52.5 | nQ-10-14R_55.5 | nQ-10-14R_58.5 |
| CONSTITUENT (unit in mg/kg) | | | | | | |
| 1,1,1-Trichloroethane | < 0.55 | < 0.23 | < 0.2 | 4.9 | 0.11 J | < 0.46 |
| 1,1,2,2-Tetrachloroethane | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| 1,1,2-trichloro-1,2,2-trifluoroethane | < 1.1 | < 0.45 | < 0.39 | < 4.9 | < 0.5 | < 0.92 |
| 1,1,2-Trichloroethane | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| 1,1-Dichloroethene | 0.29 J | < 0.23 | < 0.2 | 0.5 J | < 0.25 | < 0.46 |
| 1,2,4-Trichlorobenzene | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| 1,2-Dibromo-3-chloropropane | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| 1,2-Dibromoethane | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| 1,2-Dichlorobenzene | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| 1,2-Dichloroethane | 0.39 J | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| 1,2-Dichloropropane | 0.15 J | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| 1,3-Dichlorobenzene | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| 1,4-Dichlorobenzene | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| 2-Butanone (MEK) | 1.6 | 0.5 | 0.46 | < 4.9 | 0.65 | 0.64 J |
| 4-Methyl-2-Pentanone | 1.5 | < 0.45 | < 0.39 | < 4.9 | < 0.5 | < 0.92 |
| Acetone | 1.2 J | 0.78 J | 0.61 J | < 9.8 | 0.69 J | < 1.8 |
| Benzene | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| Bromodichloromethane | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| Bromoform | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| Bromomethane | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| Carbon Disulfide | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| Carbon Tetrachloride | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| CFC-11 | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| CFC-12 | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| Chlorobenzene | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| Chlorodibromomethane | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| Chloroethane | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| Chloroform | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| Chloromethane | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| cis-1,2-Dichloroethene | 170 | < 0.23 | 3.7 | 140 | 3.7 | 4.5 |
| cis-1,3-Dichloropropene | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| Cyclohexane | < 0.55 | < 0.23 | < 0.2 | 1.9 J | 0.36 | 0.62 |
| Dichlormethane | 0.91 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| Ethylbenzene | < 0.55 | < 0.23 | < 0.2 | 26 | 6.8 | 4.9 |
| Isopropylbenzene | < 0.55 | < 0.23 | < 0.2 | 2 J | 1.4 | 1.5 |
| Methyl Acetate | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| Methyl N-Butyl Ketone (2-Hexanone) | < 1.1 | < 0.45 | < 0.39 | < 4.9 | < 0.5 | < 0.92 |
| Methylcyclohexane | 0.2 J | < 0.23 | < 0.2 | 53 | 18 | 27 |
| Methyl-tert-butylether | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| Styrene (Monomer) | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| Tetrachloroethene | < 0.55 | < 0.23 | < 0.2 | 2.5 | < 0.25 | < 0.46 |
| Toluene | 4.2 | < 0.23 | 0.065 J | 490 | 28 | 2.2 |
| Total Xylenes | < 0.55 | < 0.23 | < 0.2 | 120 | 14 | 0.16 J |
| trans-1,2-Dichloroethene | 0.45 J | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| trans-1,3-Dichloropropene | < 0.55 | < 0.23 | < 0.2 | < 2.5 | < 0.25 | < 0.46 |
| Trichloroethene | 36 | < 0.23 | 0.15 J | 11 | 0.056 J | < 0.46 |
| Vinyl chloride | 3.8 | < 0.23 | 0.14 J | < 2.5 | < 0.25 | < 0.46 |
| TVOCs | 220 | 1.3 | 5.1 | 850 | 74 | 42 |

Notes and Abbreviations on last page.

Table 4. Concentrations of Volatile Organic Compounds in Soil Samples from Soil Borings, Fixed Base Laboratory, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

Notes and Abbreviations:

1. Results validated following protocols specified in March 2006 RI/FS Work Plan (ARCADIS G&M, Inc. 2006).
2. Samples submitted to fixed based laboratory were analyzed for the TCL VOCs using USEPA Method 8260C.
3. Samples analyzed on a wet weight basis.
4. Samples were collected every 4 feet per the Pre-Design Sampling Work Plan for VOC Source Area (Work Plan) (EMAGIN 2014)
5. Additional samples collected per Work Plan Addendum (ARCADIS 2014) were collected every 3 feet.

TVOCs are rounded to two significant numbers.

15 Indicates TVOCs greater than 10 mg/kg

Bold value indicates a detection

| | |
|-------|---|
| RI/FS | Remedial Investigation/Feasibility Study |
| TCL | Target compound list |
| VOCs | Volatile organic compounds |
| TVOCs | Total volatile organic compounds |
| ft | Feet below original land surface that existed prior to the Town of Oyster Bay bringing in cover material. |
| mg/kg | Milligrams per kilogram |
| J | Value is estimated |

DRAFT

Table 5. Comparison of Field Analytical Method and Fixed Base Laboratory TVOC Results, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| Sample ID | Field Analytical Method TVOC Concentration | Fixed Base Laboratory Method TVOC Concentration | Are Field and Fixed Base Laboratory Concentrations Consistent With Regard to 10 mg/kg Criteria? |
|-------------|--|---|---|
| F-2-14_34 | ND | <15.38 | Yes (ND) |
| G-8-14_28 | ND | <17.66 | Yes (ND) |
| H-5-14_46 | 14.70 | 16.22 | Yes (>10 mg/kg) |
| H-5-14_50 | 7.77 | 8.39 | Yes (<10 mg/kg) |
| H-7-14_12 | 437.03 | 877.44 | Yes (>10 mg/kg) |
| I-2-14_46 | ND | 0.16 | Yes (<10 mg/kg) |
| I-2-14_50 | 0.5 | 0.54 | Yes (<10 mg/kg) |
| J-4-14_46 | 16.50 | 16.55 | Yes (>10 mg/kg) |
| J-4-14_50 | 2.10 | 3.78 | Yes (<10 mg/kg) |
| K-10-14_52 | ND | 1.47 | Yes (<10 mg/kg) |
| L-12-14_44 | 15.57 | 90.59 | Yes (>10 mg/kg) |
| L-8-14_8 | ND | 1.921 | Yes (<10 mg/kg) |
| L-8-14_44 | 13.49 | 2.48 | NO |
| L-8-14_48 | 1.60 | 1.832 | Yes (<10 mg/kg) |
| L-8-14_55 | 5.11 | 8.275 | Yes (<10 mg/kg) |
| L-8-14_56 | 1.68 | 2 | Yes (<10 mg/kg) |
| M-7-14_22 | ND | 0.34 | Yes (<10 mg/kg) |
| M-7-14_52 | 2.40 | 3.497 | Yes (<10 mg/kg) |
| M-7-14_56 | 1.75 | 2.06 | Yes (<10 mg/kg) |
| M-9-14_24 | ND | <16.03 | Yes (ND) |
| M-9-14_46 | 4.23 | 6.181 | Yes (<10 mg/kg) |
| M-9-14_57 | 0.55 | 0.88 | Yes (<10 mg/kg) |
| n-12-14_48 | 5.00 | 10.736 | NO |
| nJ-6-14_12 | ND | 0.2 | Yes (<10 mg/kg) |
| NL-10-14_12 | ND | <6.11 | Yes (ND) |
| NQ-13-14_4 | 1.96 | 3.667 | Yes (<10 mg/kg) |
| O-5-14_52 | ND | 1.85 | Yes (<10 mg/kg) |
| P-12-14_36 | ND | <14.26 | Yes (ND) |
| P-12-14_44 | 17.48 | 23.549 | Yes (>10 mg/kg) |
| P-12-14_53 | 1.76 | 2.791 | Yes (<10 mg/kg) |
| P-7-14_56 | ND | <23.16 | Yes (ND) |
| P-9-14_16 | 219.12 | 281.21 | Yes (>10 mg/kg) |
| P-9-14_20 | 28.08 | 36.5 | Yes (>10 mg/kg) |
| P-9-14_32 | ND | <15.42 | Yes (ND) |
| P-9-14_44 | 39.53 | 57.633 | Yes (>10 mg/kg) |
| Q-8-14_24 | ND | <14.26 | Yes (ND) |
| Q-8-14_44 | 11.44 | 16.3 | Yes (>10 mg/kg) |

Notes and Abbreviations:

| | |
|-------|---------------------------------|
| mg/kg | milligrams per kilogram |
| ND | Not Detected |
| TVOC | Total Volatile Organic Compound |



Table 6. Concentrations of TCLP Volatile Organic Compounds in Soil Samples from Soil Borings, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| CONSTITUENT (units in ug/l) | Sample Location: | B-34 | B-34 | B-34 | B-34 | B-34 | B-34 | B-34 | B-34 |
|-----------------------------|-----------------------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Sample Midpoint Depth (ft): | 4.5 | 7.5 | 13.5 | 34.5 | 43.5 | 46.5 | 49.5 | 52.5 |
| | Sample Date: | 5/12/2015 | 5/12/2015 | 5/12/2015 | 5/12/2015 | 5/12/2015 | 5/12/2015 | 5/12/2015 | 5/12/2015 |
| | Sample Name: | B-34 (4.5) | B-34 (7.5) | B-34 (13.5) | B-34 (34.5) | B-34 (43.5) | B-34 (46.5) | B-34 (49.5) | B-34 (52.5) |
| | Regulatory Limit (ug/l) | | | | | | | | |
| 1,1-Dichloroethene | 700 | < 20 | < 20 | < 20 | < 20 U |
| 1,2-Dichloroethane | 500 | < 20 | < 20 | < 20 | < 20 U |
| 2-Butanone (MEK) | 200000 | < 200 | < 200 | < 200 | < 200 U |
| Benzene | 500 | < 20 | < 20 | < 20 | < 20 U |
| Carbon Tetrachloride | 500 | < 20 | < 20 | < 20 | < 20 UJ | < 20 UJ | < 20 UJ | < 20 UJ | < 20 U |
| Chlorobenzene | 100000 | < 20 | < 20 | < 20 | < 20 U |
| Chloroform | 6000 | < 20 | < 20 | < 20 | < 20 U |
| Tetrachloroethene | 700 | < 20 | < 20 | < 20 | < 20 U | < 20 U | < 20 U | 17 J | < 20 U |
| Trichloroethene | 500 | < 20 | < 20 | 19 | < 20 U | 5,500 | 59 | 25 | < 20 U |
| Vinyl chloride | 200 | < 20 | < 20 | < 20 | < 20 U |

Notes and Abbreviations on last page.



Table 6. Concentrations of TCLP Volatile Organic Compounds in Soil Samples from Soil Borings, Park Soil Pre-Design Sampling, Northrop Grumman Systems Corporation, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

| CONSTITUENT (units in ug/l) | Regulatory Limit (ug/l) | | | | | |
|-----------------------------|-------------------------|---------|---------|--------|---------|---------|
| | F-6-14 | F-6-14 | H-5-14 | H-7-14 | H-7-14 | H-7-14 |
| 1,1-Dichloroethene | 700 | < 20 U | < 20 U | < 20 U | < 20 U | < 20 U |
| 1,2-Dichloroethane | 500 | < 20 U | < 20 U | < 20 | < 20 U | < 20 U |
| 2-Butanone (MEK) | 200000 | < 200 U | < 200 U | < 200 | < 200 U | < 200 U |
| Benzene | 500 | < 20 U | < 20 U | < 20 | < 20 U | < 20 U |
| Carbon Tetrachloride | 500 | < 20 U | < 20 U | < 20 | < 20 U | < 20 U |
| Chlorobenzene | 100000 | < 20 U | < 20 U | < 20 | < 20 U | < 20 U |
| Chloroform | 6000 | < 20 U | < 20 U | < 20 | < 20 U | < 20 U |
| Tetrachloroethene | 700 | < 20 U | < 20 U | < 20 | < 20 U | < 20 U |
| Trichloroethene | 500 | < 20 U | < 20 U | < 20 | < 20 U | < 20 U |
| Vinyl chloride | 200 | < 20 U | < 20 U | < 20 | < 20 U | < 20 U |

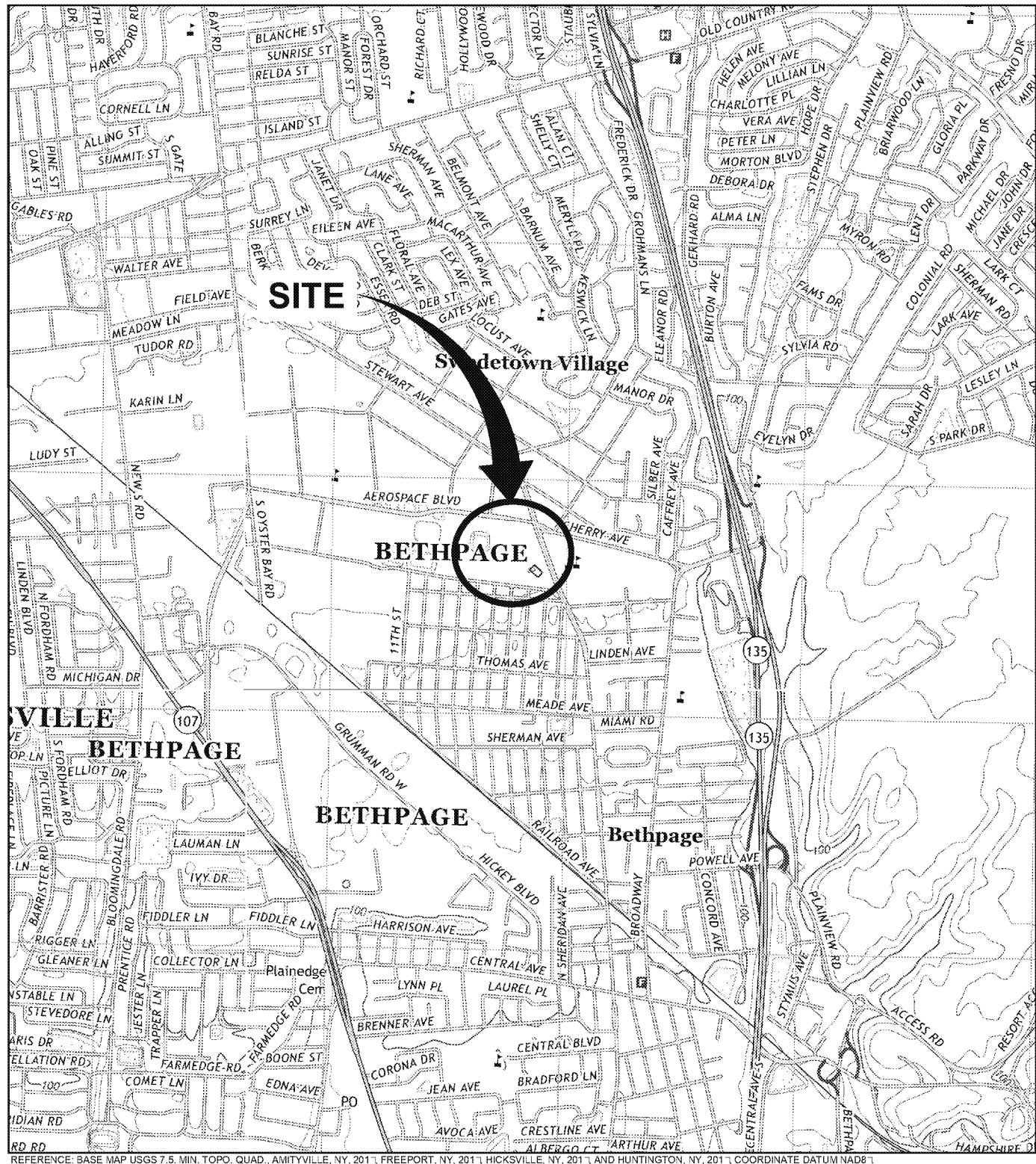
Notes and Abbreviations:

Bold value indicates a detection

| | |
|------|----------------------------------|
| VOCs | Volatile organic compounds |
| ft | Feet below original land surface |
| ug/l | Micrograms per liter |
| J | Value is estimated |

DRAFT

Figures



0 2000' 4000'

DRAFT

AREA LOCATION

NEW YORK

NORTHROP GRUMMAN SYSTEMS CORPORATION
BETHPAGE, NEW YORK

SITE LOCATION

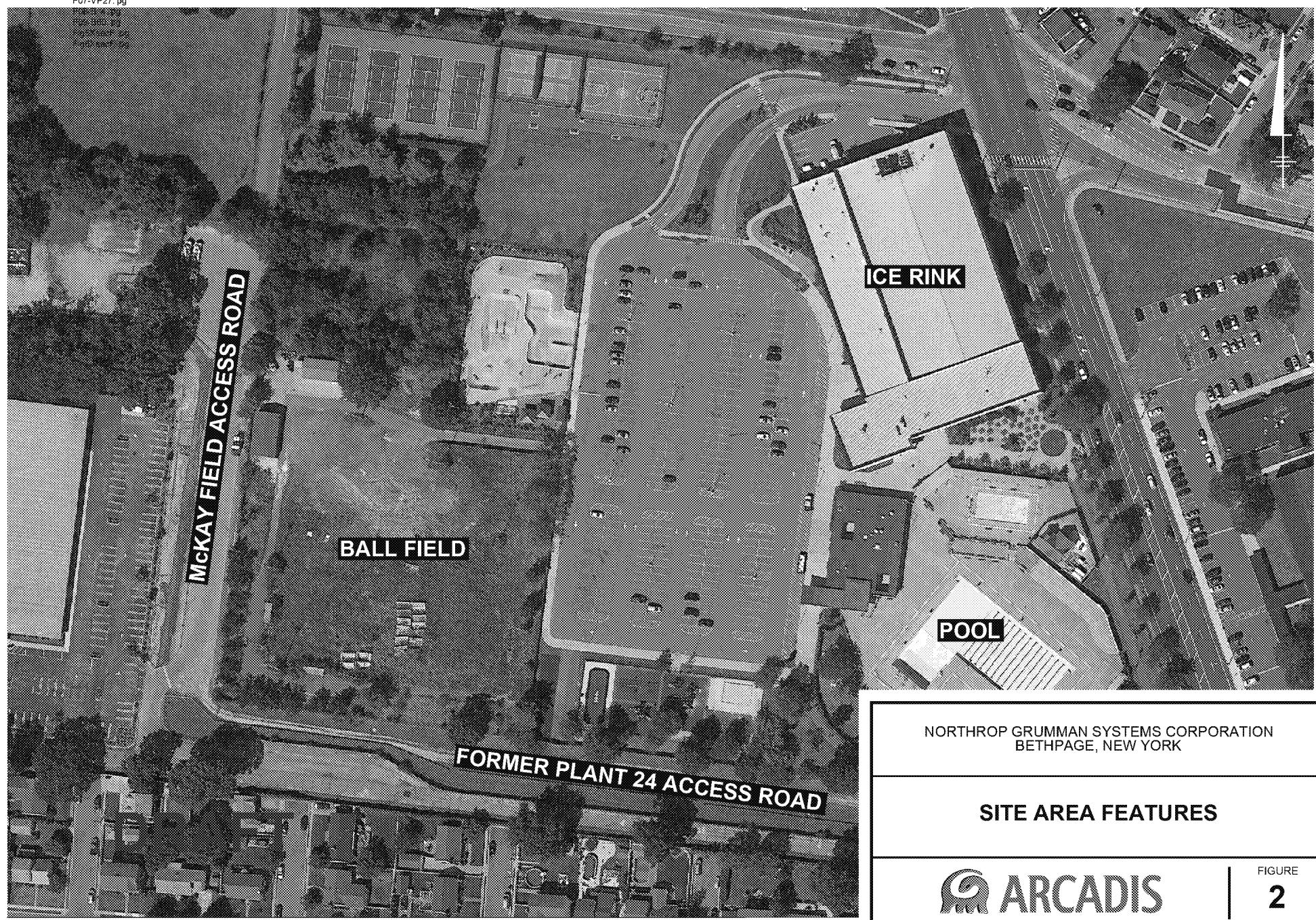
ARCADIS

FIGURE

1

XREFS: IMAGES: PROJECTNAME: ----
Xr1051X00 Aeria.TIF
FO7-VP27.pg

SOURCE: SITE AERIAL PHOTOGRAPH ADOPTED FROM GOOGLE EARTH PRO WITH AN IMAGERY DATE OF 09/19/2011



NORTHROP GRUMMAN SYSTEMS CORPORATION
BETHPAGE, NEW YORK

SITE AREA FEATURES

 **ARCADIS**

FIGURE

2



LEGEND:

- PRE-DESIGN VOC SAMPLE LOCATION COMPLETED PER WORK PLAN AND ADDENDA
- HISTORICAL VOC SAMPLE LOCATION
- 10 mg/kg TVOC CONTOUR OF AREAS 1 AND 2 IDENTIFIED IN WORK PLAN

TVOCs TOTAL VOLATILE ORGANIC COMPOUNDS
mg/kg MILLIGRAMS PER KILOGRAM

DRAFT

0 40' 80'
APPROXIMATE SCALE IN FEET

NORTHROP GRUMMAN SYSTEMS CORPORATION
BETHPAGE, NEW YORK

BETHPAGE COMMUNITY PARK
VOC SOURCE AREA
AND SAMPLING LOCATIONS

 ARCADIS

FIGURE
3



LEGEND:

- TVOC CONCENTRATIONS GREATER THAN 10 mg/kg IN SHALLOW SOILS (5-15 FEET BELOW LAND SURFACE)
- TVOC CONCENTRATIONS GREATER THAN 10 mg/kg IN DEEP SOILS (40-55 FEET BELOW LAND SURFACE)

TVOCs TOTAL VOLATILE ORGANIC COMPOUNDS
mg/kg MILLIGRAMS PER KILOGRAM

A A' SECTION LINE OF TVOCs IN SOIL
(SEE FIGURES 5 AND 6)

DRAFT

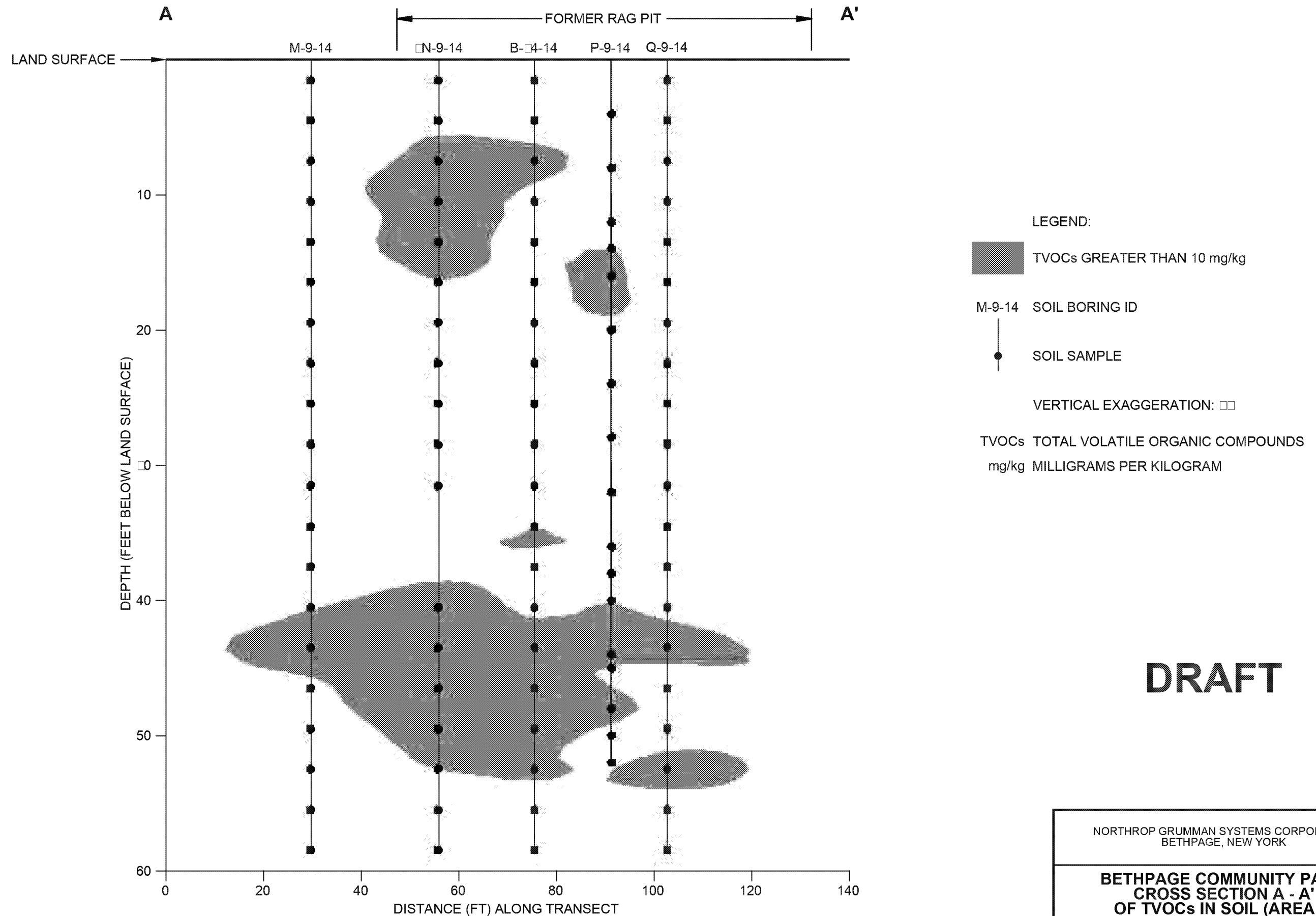
0 50' 100'
APPROXIMATE SCALE IN FEET

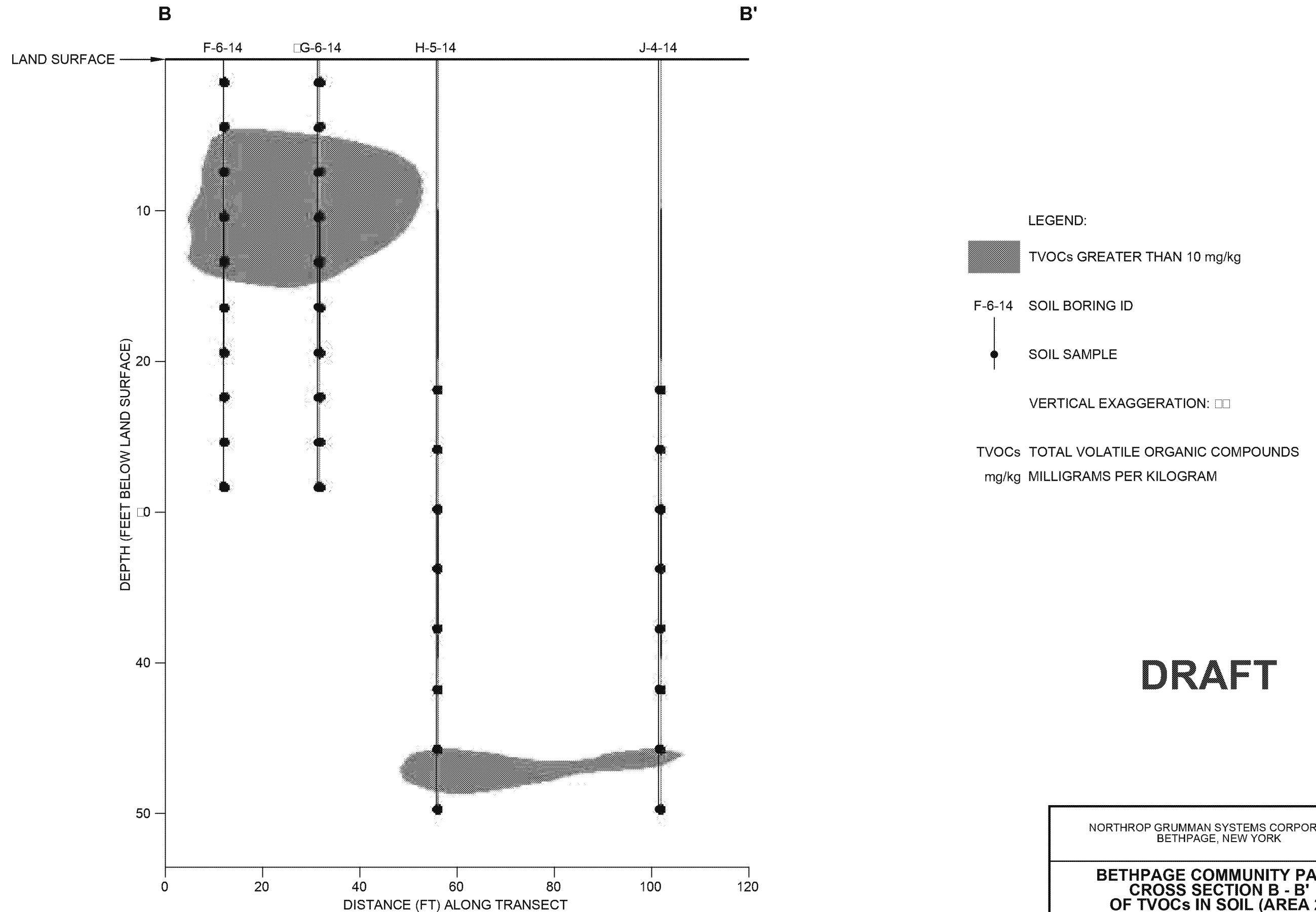
NORTHROP GRUMMAN SYSTEMS CORPORATION
BETHPAGE, NEW YORK

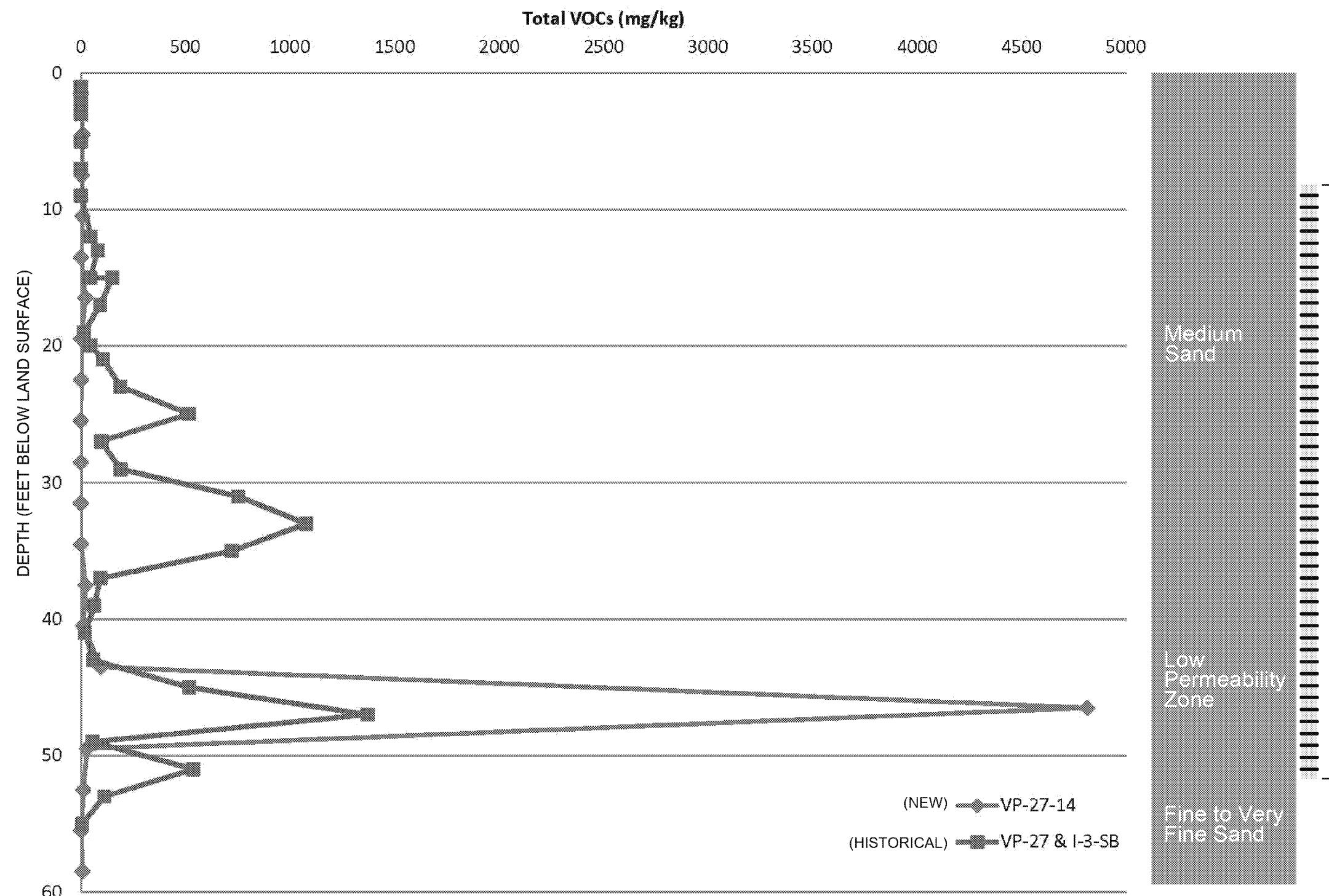
BETHPAGE COMMUNITY PARK
VADOSE ZONE AREAL EXTENT OF TVOCs
IN SOILS GREATER THAN 10 MG/KG

ARCADIS

FIGURE
4







THE SCREEN ZONE DEPICTED REPRESENTS THE TOTAL VERTICAL INTERVAL OVER WHICH THE BPSGCS EXTRACTION WELLS ARE SCREENED AND DOES NOT REPRESENT THE SPECIFIC SCREENED INTERVAL OF ANY SINGLE EXTRACTION WELL.

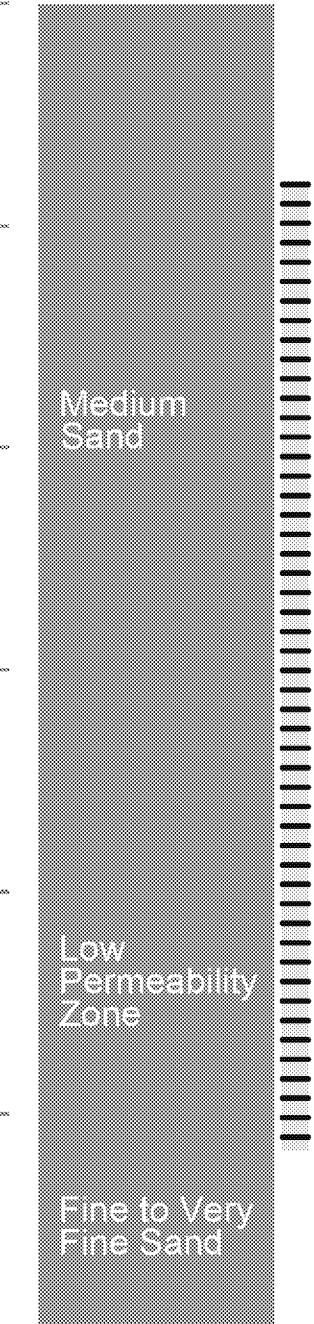
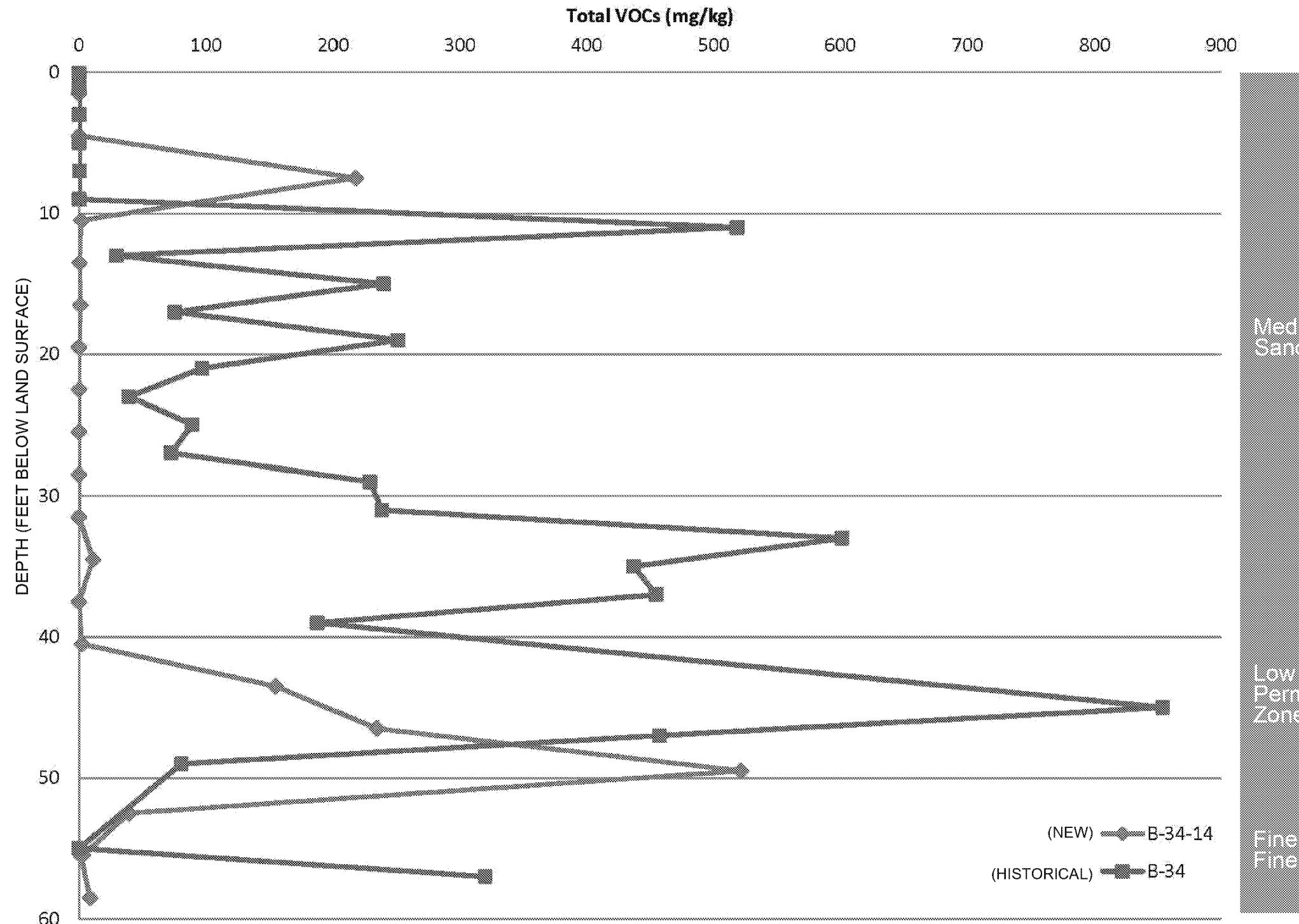
DRAFT

NORTHROP GRUMMAN SYSTEMS CORPORATION
BETHPAGE, NEW YORK

BETHPAGE COMMUNITY PARK
VP-27 SOIL RESAMPLING COMPARISON

ARCADIS

FIGURE
7



THE SCREEN ZONE DEPICTED REPRESENTS THE TOTAL VERTICAL INTERVAL OVER WHICH THE BPSGCS EXTRACTION WELLS ARE SCREENED AND DOES NOT REPRESENT THE SPECIFIC SCREENED INTERVAL OF ANY SINGLE EXTRACTION WELL.

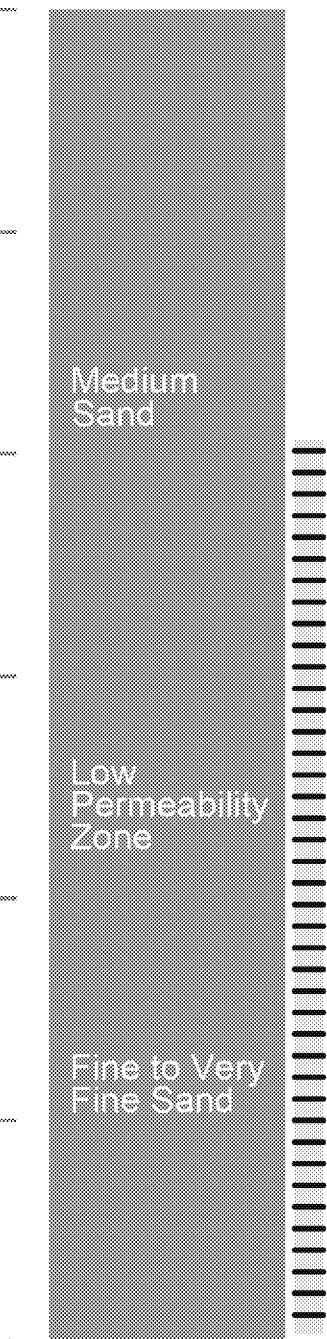
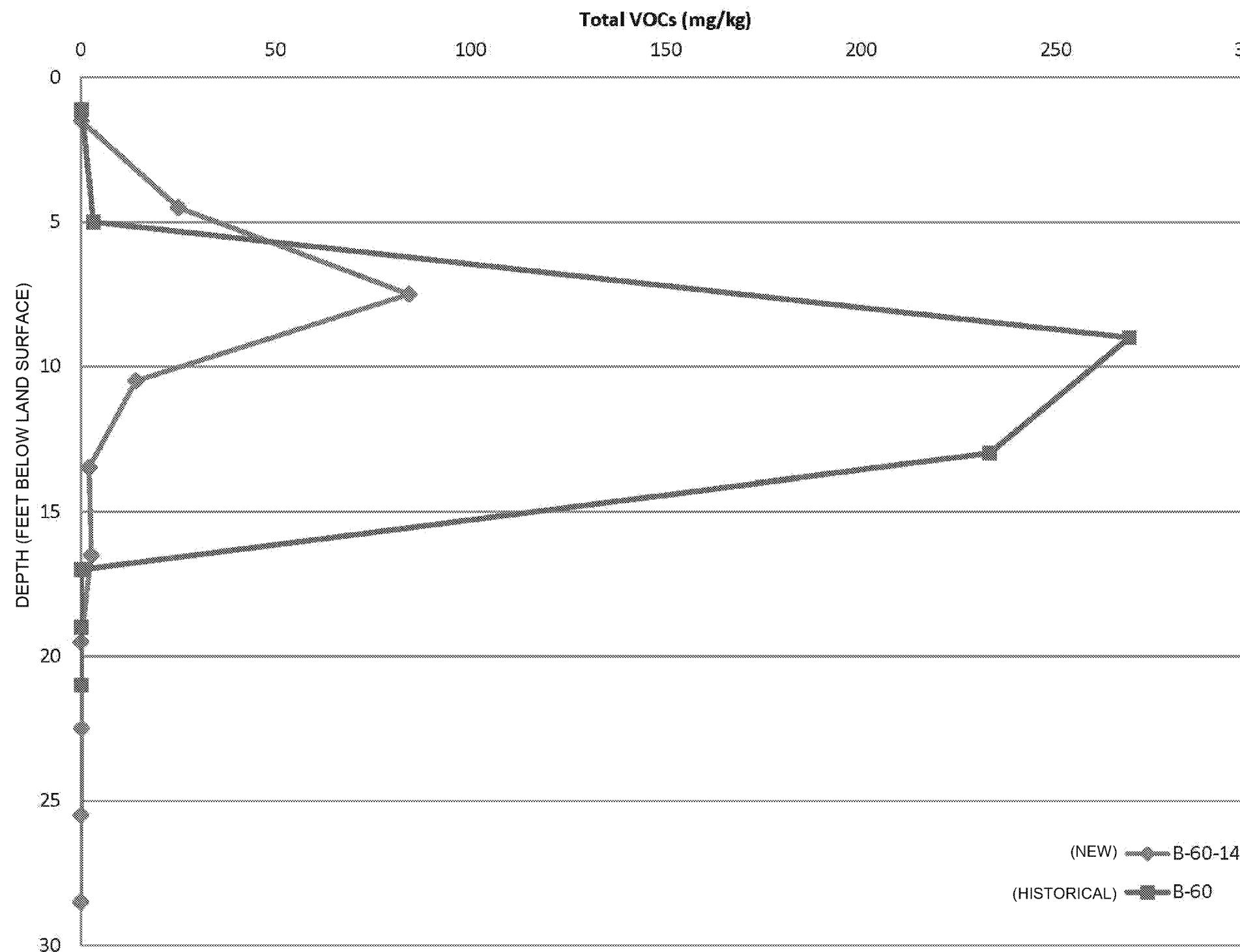
DRAFT

NORTHROP GRUMMAN SYSTEMS CORPORATION
BETHPAGE, NEW YORK

BETHPAGE COMMUNITY PARK
B-34 SOIL RESAMPLING COMPARISON

ARCADIS

FIGURE
8



THE SCREEN ZONE DEPICTED REPRESENTS THE TOTAL VERTICAL INTERVAL OVER WHICH THE BPSGCS EXTRACTION WELLS ARE SCREENED AND DOES NOT REPRESENT THE SPECIFIC SCREENED INTERVAL OF ANY SINGLE EXTRACTION WELL.

DRAFT

NORTHROP GRUMMAN SYSTEMS CORPORATION
BETHPAGE, NEW YORK

BETHPAGE COMMUNITY PARK
B-60 SOIL RESAMPLING COMPARISON

ARCADIS

FIGURE
9

